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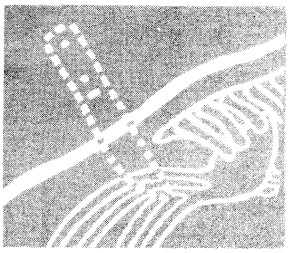

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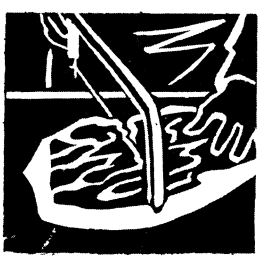
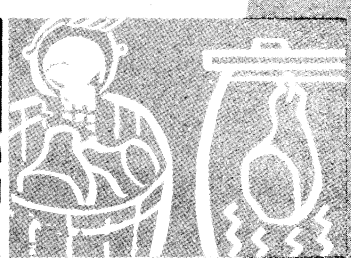
SLAUGHTERING CUTTING, and PROCESSING PORK on the Farm





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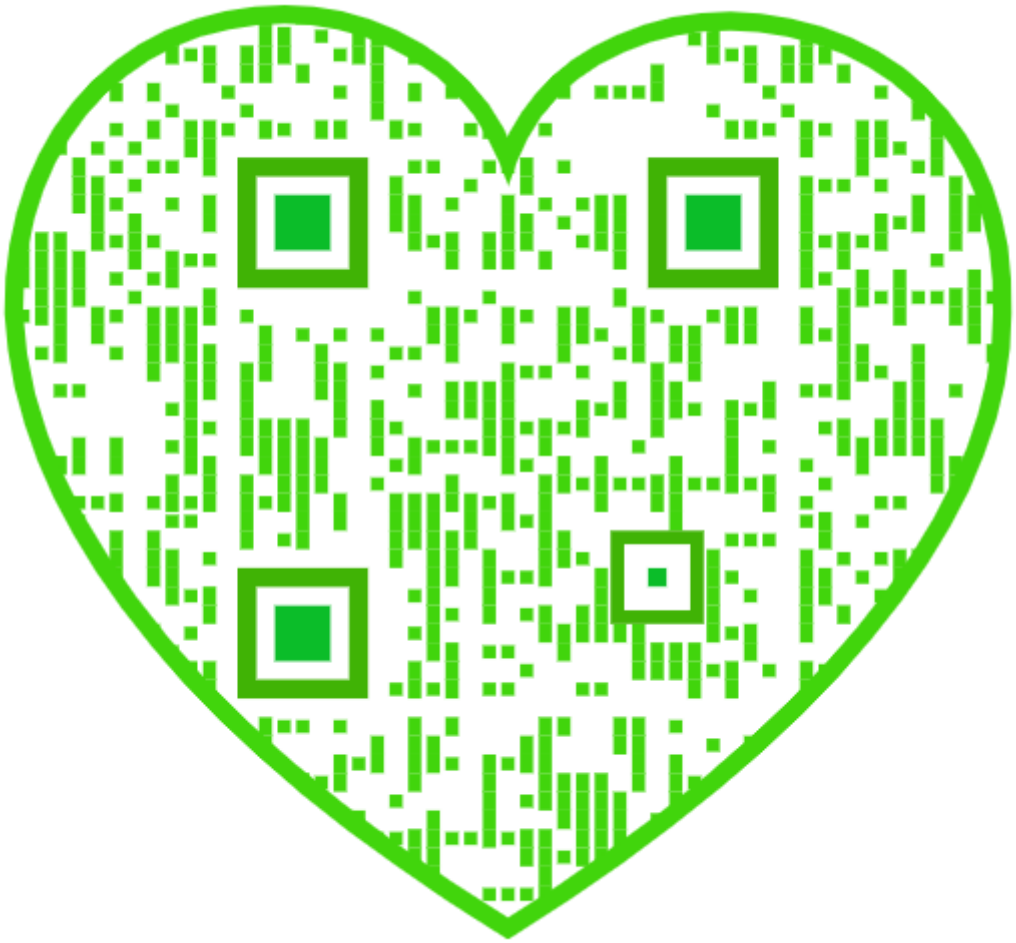

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Precautions

To control flies and other insects at the time of slaughtering, chilling, cutting, and processing, apply the proper insecticide. Use a product specifically labeled for this purpose or for use in dairy or milk-processing rooms. Follow instructions on the product label, observing all the precautions listed. Be sure to cover all equipment and working surfaces with a drop cloth before spraying. After you have sprayed, and before beginning slaughtering, chilling, cutting, and processing thoroughly wash the equipment, tables, and floors with plenty of hot water and soap or detergent.

SLAUGHTERING, CUTTING, and PROCESSING PORK on the Farm

Success in preparing meat depends on strict attention to the methods used. None of the details of these methods is difficult, but all are important.

SLAUGHTERING

EQUIPMENT

You do not need elaborate and expensive equipment, but certain tools are essential and others are desirable (fig. 1). You can use the curved 6-inch skinning knife for sticking the hogs, raising the gambrel tendons, shaving and dressing the carcass, and trimming the meat.

You need a narrow-bladed boning knife—the narrower the better—for preparing boneless roast and boning meat for sausage, freezing, or canning.

Your knives should always be sharp. Keep the proper bevel and occasionally use a good oil stone. Use a smooth, high-quality, 9- to 14-inch steel to keep a knife sharp. Form the habit of steeling the knife briefly but frequently while using it.

Use a 24- to 28-inch meat saw for splitting hog carcasses and cutting the chilled carcass.

Bell-shaped hog scrapers are the best hand instruments for removing hair, scurf, and dirt. A fairly heavy steel scraper is the most efficient. You can use a scraper 4 inches in diameter more easily than a larger size. Smaller scrapers usually are too light and do not hold their shape.

Use a clean singletree with open hooks as a gambrel for hanging the carcass rather than a notched stick because there is less danger of the carcass slipping off the singletree. When you are killing many hogs, use commercial metal gambrels. Use a hog or hay hook to hold the animal during scalding. You will need a block and tackle, ladder, rack, or some other device for suspending the carcasses that are to be dressed and chilled.

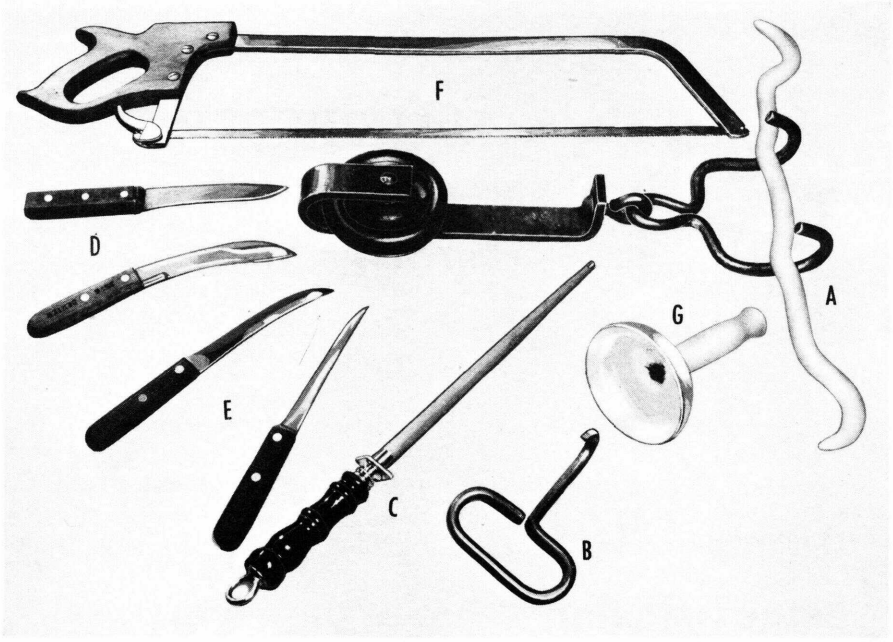

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Figure 1.—Equipment for use in slaughtering and dressing hogs: ***A***, Gambrel (singletree); ***B***, hook; ***C***, smooth steel; ***D***, skinning knives; ***E***, boning knives; ***F***, saw; and ***G***, bell-shaped scraper.

A convenient scraping table is 4½ feet wide, 2½ feet high, and 4 to 8 feet long. On a table of this width, you can lay the hog crosswise so that one man can scrape the rear end while another scrapes the head.

Use a small blowtorch for singeing the head and feet, and a wire brush for scrubbing these parts.

You need a thermometer that will register up to 212° F. Use a salinometer (or salimeter), operating on the same principle as the wet-battery hydrometer, to measure accurately the saltiness of the curing brine. It is inexpensive, and you can buy it at any butcher's supply house.

Provide enough pans or tubs for holding edible and inedible viscera separately.

Large quantities of hot and cold water are required.

You can scald a hog weighing up to 250 pounds in a 50-gallon hardwood or metal barrel. Figure 2 shows a combination water heater and scalding vat made from a watering tank. With it you can hold water at the proper temperature for scalding a number of hogs.

TYPE OF HOG TO SLAUGHTER

A young, healthy, meat-type hog weighing about 200 pounds at time of slaughter makes an ideal size to

slaughter. It produces moderate-size cuts that have the leanness desired by most people. The meat-type hog produces as much pork and lard as a family of two consumes in a year. Heavier, fat hogs produce less lean meat and more lard.

A meat-type hog, when cut and trimmed according to the methods described later, will yield over half of its live weight in hams, picnic shoulders, loins, bacon, and shoulder butt. The lard from this meat-type hog will be 9 to 13 percent of its live weight; from a fat hog, 14 to 18 percent.

A smooth, moderately well-finished, thrifty and healthy hog usually produces a desirable quality of meat.

CARE OF HOGS JUST BEFORE SLAUGHTER

The care of an animal just before it is slaughtered has much to do with getting a good "stick." Meat from a well-bled hog keeps better than meat from a hog that has not bled well. Pen the animal by itself the day before butchering. A hog bleeds more thoroughly and dresses more easily after a 24-hour fast, during which it is given all the water it will drink. Do not run the animal or wrestle with it; this can cause a temporary fever and, if the animal is killed before it quiets down, the meat is likely to be bloody (sometimes referred to as fiery). Such meat looks bad and spoils easily. Bruises and whip marks cause bloody spots, which must be trimmed out.

STICKING

Kill the hog as humanely as possible and in a way that will insure thorough drainage of the blood. If you have kept the hog in a small pen

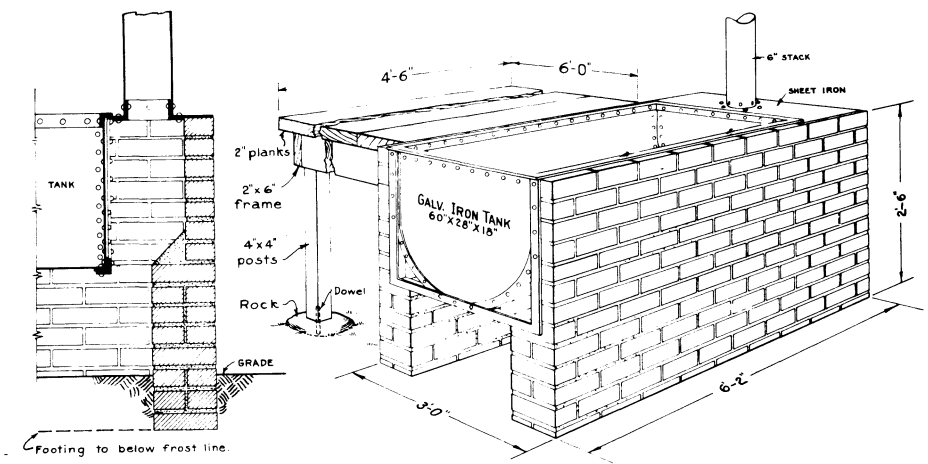

Figure 2.—Combination water heater, scalding vat, and scraping table. The tank also may be set on the ground over a trench and banked with sheet metal or earth.

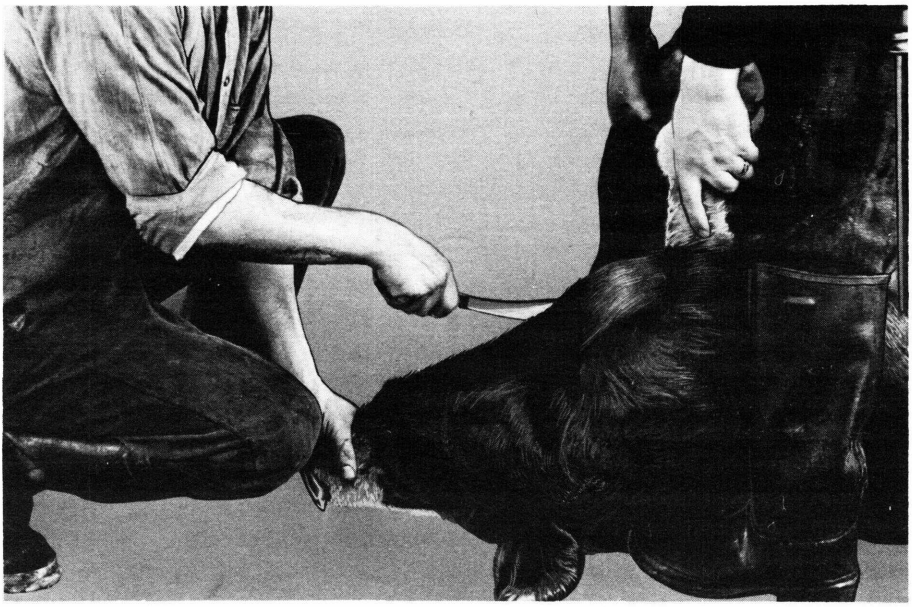

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Figure 3.—Sticking the hog. Note that the feet of the man holding the hog are pressed against the shoulder of the animal to prevent it from rolling.

the day before, the job of stunning or catching it without exciting it will be easier.

Stun the hog by striking it one sharp blow with a mechanical stunner or by shooting it in the forehead midway between and slightly above the eyes. Make the first attempt successful; improperly placed blows or bullets that do not stun can cause the animal much pain. Because bullets sometimes glance from a hog's skull or miss the mark, take care to prevent injury to persons or to other livestock.

The blood will drain out more completely if the animal is stuck promptly after being stunned. You can restrain the animal for sticking after stunning in two ways:

- Shackle the hog's hind leg with a chain or rope and hoist it with a block and tackle fastened securely some 10 feet above the ground.

- To get the hog in proper position for sticking on the ground, roll it on its back, and hold it firmly by the front feet. The helper holding the hog stands astride it, facing forward, with his feet and knees pressed against the shoulders of the animal to prevent it from rolling (fig. 3).

The following sticking method is recommended for the beginner. Take

a position squarely in front of the hog, hold down the snout, and open the skin for about 3 inches in front of the breastbone. Insert the knife, edge down, straight in toward the breastbone, not downward. When you reach the breastbone, follow downward with the point of the knife until the knife slips under the breastbone and between the ribs. Push the knife in about 1 inch and direct the cut first downward toward the backbone, then backward between the first two ribs; the final thrust is forward toward the head to sever the carotid artery (fig. 4). Take care to hold the animal squarely on its back and to keep the knife in the center so as not to stick a shoulder. It is both difficult and unwise to stick the heart.

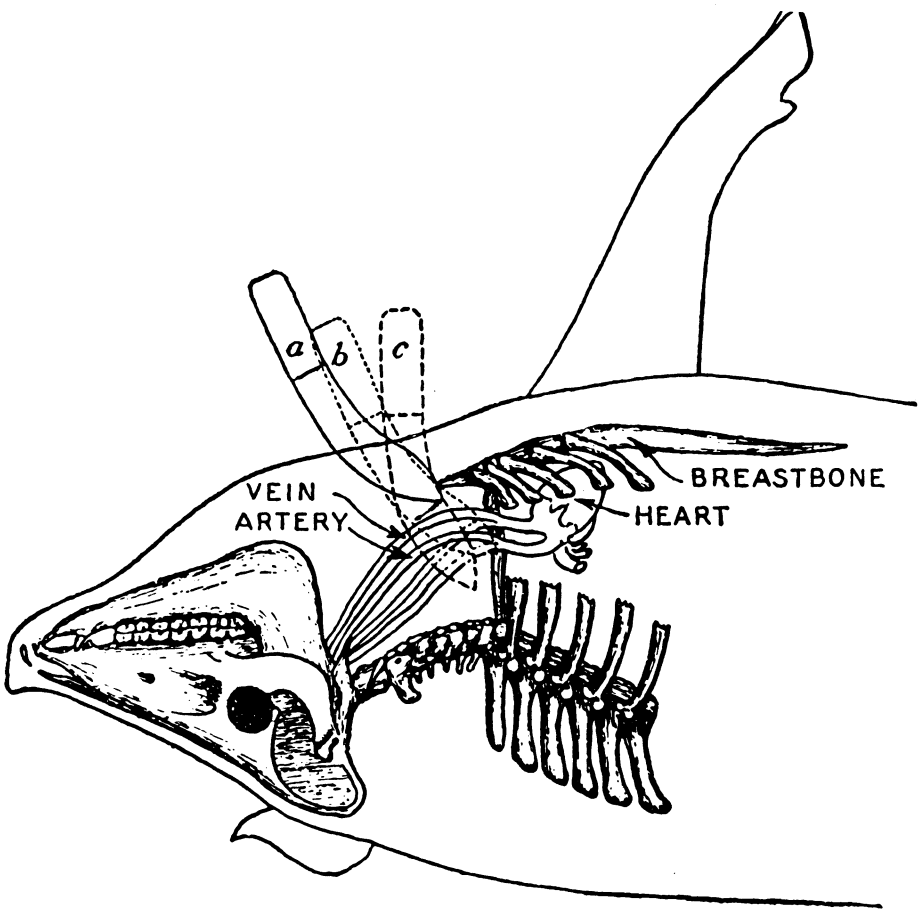

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Figure 4.—The three positions of the knife in sticking a hog: a, The knife inserted in the fat; b, the knife above the artery; c, after downward thrust has been made and the artery severed.

Let it pump out the blood as long as possible. Use the same method when bleeding hogs that are hoisted from the ground.

SCALDING

Slow scalding usually is best. At slaughterhouses, the scalding water usually is held at 140° to 144° F. With these temperatures it will take 3 to 6 minutes to loosen the hair and scurf, but there is little or no danger of setting the hair or cooking the skin. In the fall of the year when the winter hair is beginning to grow and most hogs are difficult to scald, temperatures as high as 146° to 150° sometimes are used.

On the farm, where it may be difficult to reheat the water promptly, temperatures of 155° to 165° F. often must be used at the beginning so that the water will not become cold before the hog is completely cleaned. When the water is as hot as this, keep the hog in motion (fig. 5) while it is in the water and pull it from the barrel several times. This cools the hog and lessens the danger of setting the hair. If you have plenty of boiling water available, you can start scalding with water heated to about 150°, then add hot water if necessary.

Lime, rosin, or some other substance that will make the hair cling to the scraper and pull out more easily often is put into the water. The proper water temperature is more important than any substance that can be put in the water.

Twenty-five to thirty gallons of water ordinarily is enough to scald a hog in a 50-gallon barrel. You can practically immerse lightweight or mediumweight hogs in the barrel. Hold the animal with a hook in the lower jaw. When scalding large hogs, scald the ham end and then the head end. When the head end is immersed, hold one leg of the hog with the hook caught in the gambrel tendon. At this time, another man can remove most of the hair from the hot legs and flanks even when the animal is kept in motion.

SCRAPING

When the hog is completely scalded, turn it crosswise on the table. Grip the hind legs with both hands and twist to pull off the hair. Using a hook, pull off the dew claws and toes while they are hot. Scrape the hindquarters. Another man can scrape the hair from the forequarters, feet, and head (fig. 6). Stretch the skin by moving the leg or head so as to smooth the wrinkles and make scraping easier. If patches of hair are not thoroughly scalded, loosen them by covering them with sacks or hog hair and pouring hot water on them. Dehair the hot carcass as rapidly as possible because there is a tendency for the skin to "set" and make the hair difficult to remove.

After the hair and scurf are scraped off, remove much of the dirt by rinsing the carcass with warm water and by scraping with the bell scraper pressed flat against the carcass instead of tipped on its edge as before (fig. 7). Singe the carcass with a

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Figure 5.—Scalding the hog. Keeping it in motion lessens the danger of setting the hair and works the water into the wrinkles of the skin.

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blowtorch and scrub the head and feet with a wire brush (fig. 8).

Rinse the scraped, singed carcass with cold water and shave it (fig. 9). The carcass now is ready to hang up. To insert the gambrel or hook, open the skin at the center of each hind leg just above the foot and directly over the tendons. Push the skin aside with the knife and cut down to the bone at the side of the tendons, as shown in fig. 10. Make a similar cut on the other side of the tendons. Use your fingers to raise the tendons and slip the gambrel under them. Be sure the gambrel engages both tendons. After you raise the gambrel, suspending the carcass, wash the carcass again with cold water and shave it again.

CUTTING

REMOVING INTERNAL ORGANS

Opening a hog carcass and removing the internal organs are simple operations, particularly if the animal was kept off feed for 24 hours before slaughter.

40658-B

Figure 6.—In scraping the carcass, tilt the scraper on its edge and pull forward. Use both hands and plenty of pressure.

40659–B

Figure 7.—To remove dirt, press the scraper flat against the wet skin and move it rapidly back and forth. This creates a suction that will remove much dirt and stain.

Insert the skinning knife, edge up, into the sticking place and cut up through the full length of the breastbone (fig. 11). If the breastbone is hard to cut, as it may be in older hogs, make the cut a little to one side of the middle where there is softer bone or cartilage. It sometimes is necessary to use the saw. Take care not to extend the opening incision upward beyond the chest cavity. To do so will cut into the stomach or allow the intestines and stomach to protrude and interfere with the operations to follow.

Now, begin at the other end of the carcass and cut down between the hams, taking care to keep the knife in the center. As the hams open, the white membrane that marks the exact middle can be seen. Follow this, if possible, to the pelvic bone. If you miss the middle "seam," correct the cut by locating a small bony projection that you can feel with the finger just underneath the front (forward side) of the pelvis. If the knife is directly above this projection, there usually is little difficulty in separating the hams correctly. Use the saw only if necessary to divide the pelvic bone. (Sawing the pelvic bone is necessary only with older animals.) While dividing this bone, take care to avoid puncturing the urinary bladder, which lies just below.

In dressing a barrow, loosen the penis and let it hang; remove it later

40661-B

Figure 8.—Cleaning the head. The head is scraped and singed and then scrubbed with the wire brush.

with the bung. Insert the knife handle in the opening made when you split the hams, with the point of the knife pointing outward. Guard the heel of the blade with the forefinger and thumb of the right hand and cut down the median line of the belly until this cut joins the split breastbone (fig. 12).

Allow the intestines to fall out and hang by their natural attachments. Raise the bung by slipping the knife into the pelvic cavity and loosening the bung from the fat on both sides and at the back. Pull it down toward and past the kidneys. Be careful to cut it free from the kidney fat (fig. 13).

With the left hand, grasp the intestines firmly just below the kidneys at the point where they appear to be attached to the backbone. Push down slowly but firmly until they loosen from the back.

Free the liver by running the fingers of the right hand behind it and pulling it away from the back. Still holding the intestines in the left hand, cut through the diaphragm to the backbone (fig. 14). Extend the cut around the white fibrous part of the diaphragm, which is parallel to the ribs, to the breastbone and down the breastbone to the throat. This last cut loosens the heart and lungs in the chest cavity.

Still holding the intestines with the left hand, repeat the cut on the left side of the carcass, crossing the right hand over the left. It may sometimes be necessary to cut the back artery from the backbone, thus permitting the left hand to pull the entire offal out of the carcass. The gullet still is attached to the throat, but one knife cut will free it.

Wash and rinse the body cavity with cold water before splitting the carcass. Using a saw, split the center of the backbone. This eliminates the savory, country-style backbone piece, or chine, but gives a larger quantity of meat suitable for curing and canning.

The split carcass will chill more rapidly if you pull out the leaf fat by loosening it where it is attached to the diaphragm at the last rib and stripping or fisting it up and out (fig. 15). You can remove the leaf fat more easily when the carcass is hot than after it has chilled.

In commercial practice, where carcasses are inspected, the head of the hog is unjointed before the carcass is opened.

This operation requires skill but is readily learned. Make a cut about one-half inch above the ear, at right angles to the backbone and clear through the left jowl and top of the neck and throat. Hold the left ear with the left hand, and make the cut in to the backbone. This leaves the head hanging by the bone and right jowl. The cut should meet the neck

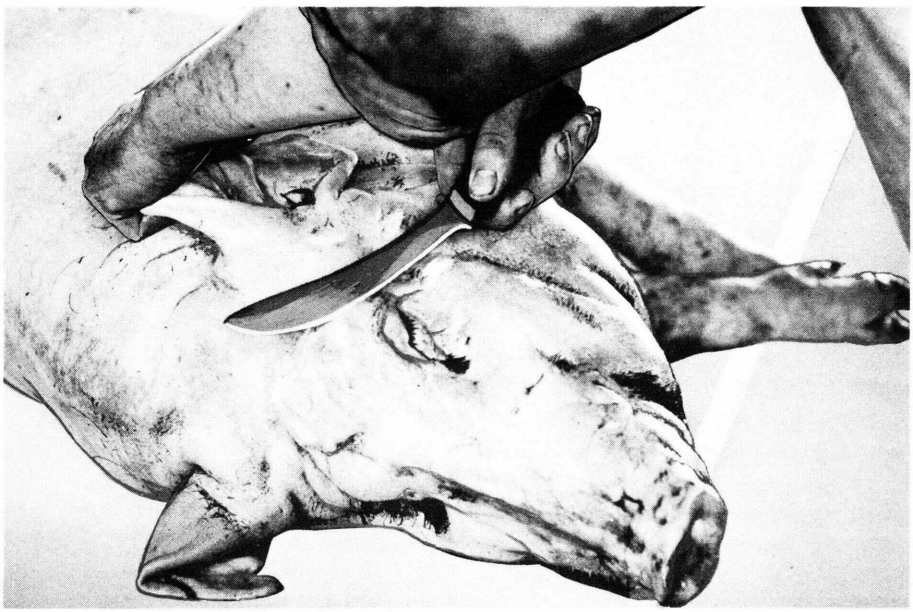

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Figure 9.—In shaving the animal, stretch the ears, jowls, legs, and other parts to smooth out the wrinkles and make shaving easier.

joint where the first neck bone joins the head.

The dished "button" end of the backbone fits over the head end of the joint in the same manner that the fingers and palm of one hand can be made to enclose the clenched fist of the other. With the knife, loosen the membranes at the lower or head end of the joint, the end of the "fingers" of the upper or enclosing "hand." As the joint opens, move the knife upward along the "knuckles" of the clenched "fist," across its top, and down the far side. The joint is about 1½ inches wide.

The head may be unjointed by cutting across above the ears, peeling out the skull and allowing the jowls to remain on the carcass.

Cut free the liver. Remove the gall bladder by lifting the small, upper end with your thumb and finger and peeling out the bladder. Cut off the heart through the auricles or "ears." Remove the tongue at its base. Promptly wash liver, heart, and tongue in clean water. Chill in cold water and hang them for further chilling and drying. Separate the caul fat from the stomach with your hands. Remove or "run" the small intestines from the ruffle fat by pulling the fat in one direction with the right hand and the intestines in the opposite direction with the left. Peel off the ruffle fat. Save this fat for lard if it is not fouled in dressing. Thoroughly wash and promptly chill it in cold water. After it is chilled, hang it to drain and dry before rendering.

CHILLING THE CARCASS

The tissues of freshly slaughtered hog carcasses contain bacteria that can spoil the meat unless their growth is promptly checked. Storing warm meat at temperatures above 40° F. often is the cause of spoilage.

Packers have practically solved the problem of sour meat by chilling the fresh, warm carcass to a temperature of 34° to 36° F. within 24 hours after

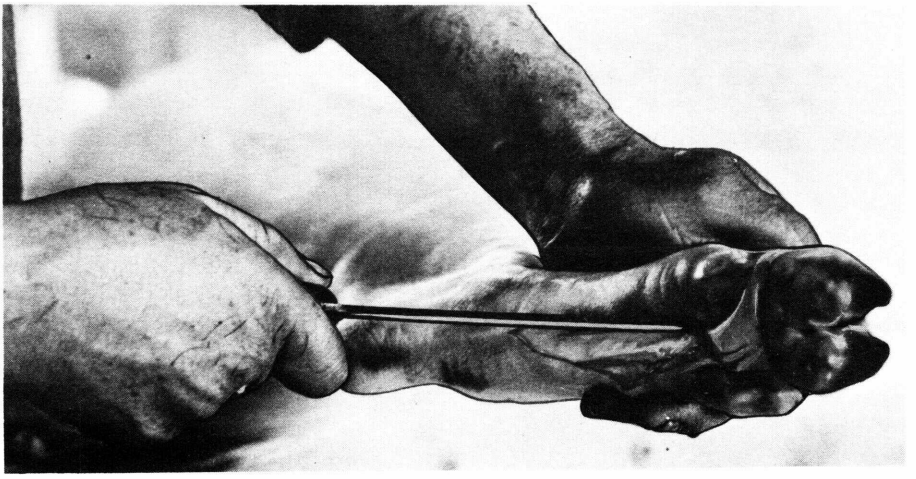

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Figure 10.—Raising the gambrel tendon.

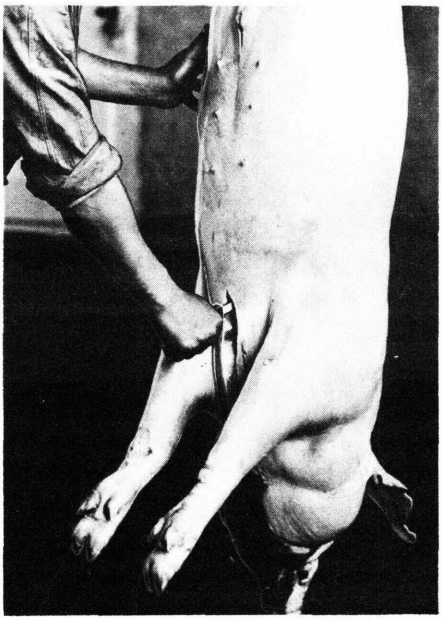

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Figure 11.—Splitting breastbone. If knife handle slants up and point down, there is little danger of cutting up too far.

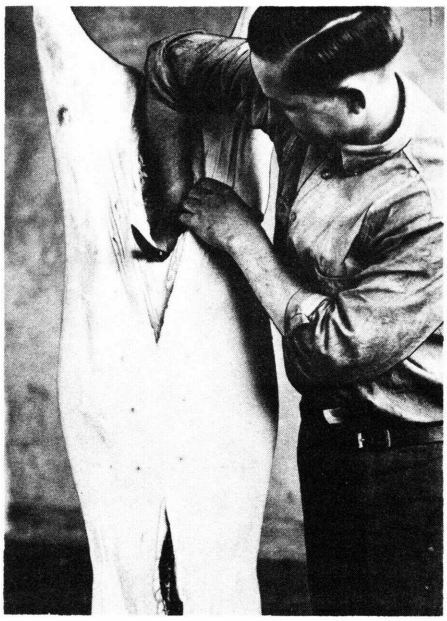

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Figure 12.—With this method of opening the carcass, there is no danger of cutting the intestines or stomach.

slaughter and by holding the meat at 36° to 40° while it is curing.

On the farm, do your butchering when the weather is as favorable as possible. Protect the freshly slaughtered carcass from freezing by hanging it in a shed or wrapping it with a sheet.

Hang carcasses to chill so that they do not touch. Be careful that the fat bellies and hams of warm, freshly slaughtered hogs do not overlap each other during the cooling process, thus closing the body cavity to air circulation. Warm hogs, so hung, frequently will show spoilage the next day, even when held at low temperature. Slight taint often is observed along the bacon strip when the hot, heavy, leaf fat is not removed. Always split warm hogs and pull the leaf fat as soon as you remove the internal organs.

If you hold warm carcasses overnight at temperatures slightly above freezing, internal temperature of the hams will not always be below 40° F. the next morning. During the second night, cuts from such meat should be spread out to permit complete chilling.

The need for prompt and thorough chilling of warm carcasses cannot be overemphasized.

Most communities have access to cold-storage and freezer-locker plants

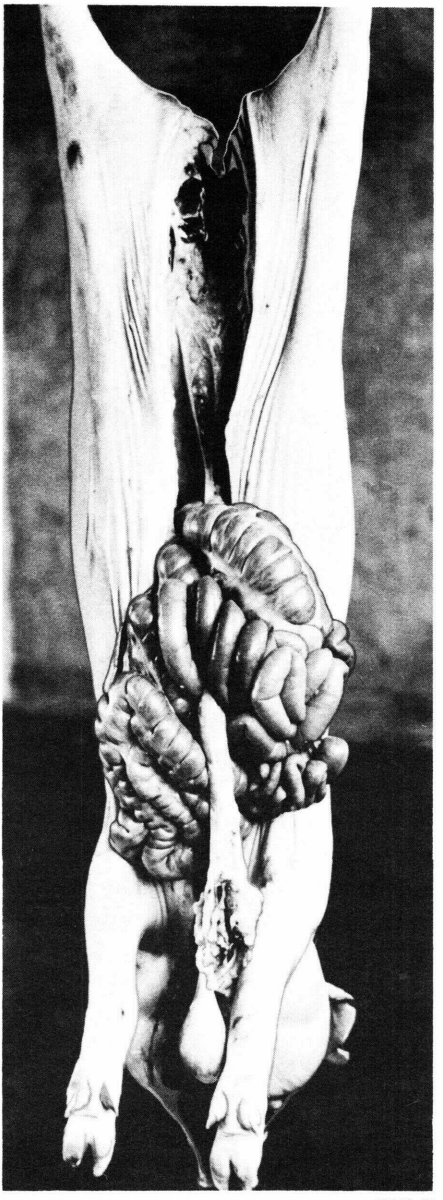

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Figure 13.—The internal organs will not fall unless the animal was fed shortly before slaughter.

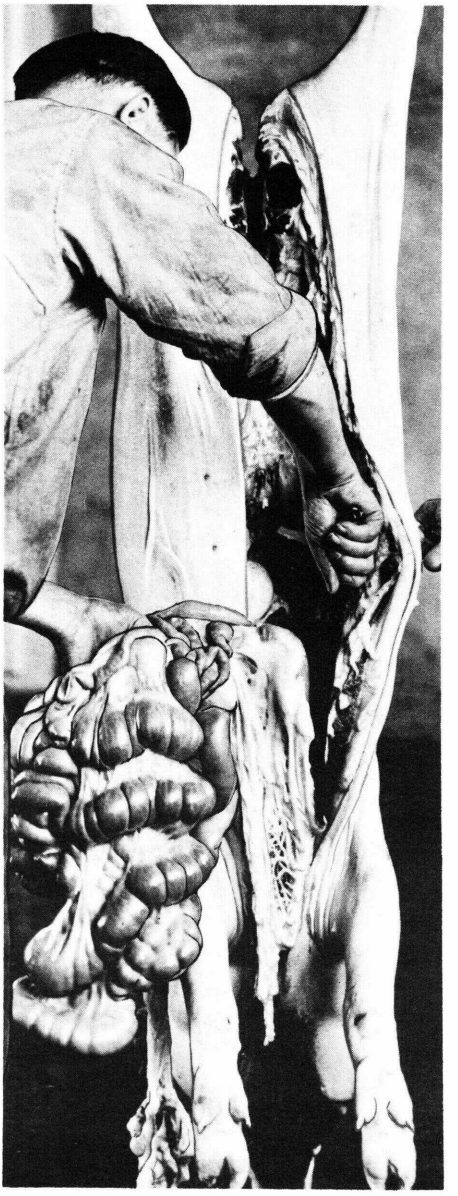

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Figure 14.—In removing intestines, grasp them carefully and firmly so they will not tear and fall.

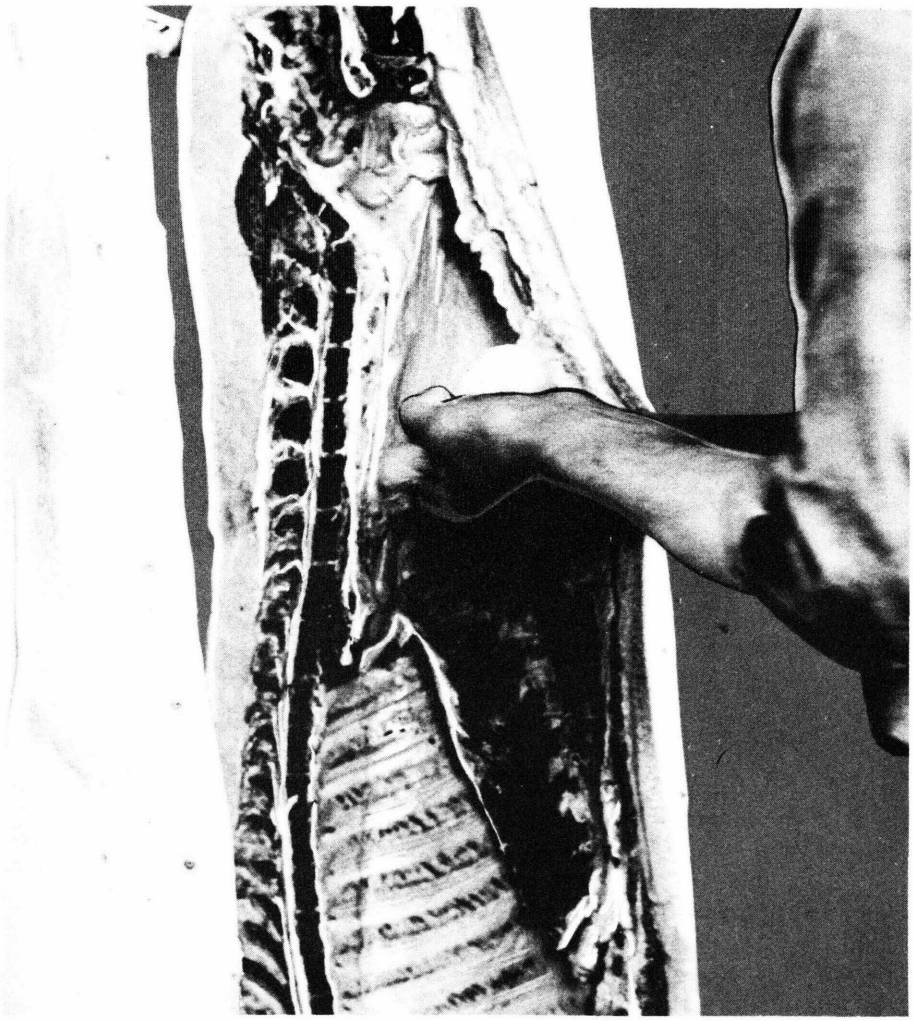

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Figure 15.—The warm leaf fat is pulled out by loosening it at the rib end and fisting it up and out.

with facilities for chilling the carcass, preparing and freezing selected cuts, storing fresh meat, and curing hams, bacons, and shoulders. Many plants have facilities for slaughtering hogs. If these facilities are not available or if you wish to do your own slaughtering, bring the warm, dressed sides of pork immediately to the cold storage plant. After chilling the carcass for 24 to 48 hours, cut your pork and prepare it for the freezer or curing bins and cut the fat for rendering into lard.

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If the weather becomes warm and no cold storage is available, cut up the warm sides and hang up individual pieces to air and cool, or pack them in cracked ice (1½ pounds of ice per pound of meat). You can lightly salt insufficiently cooled pieces with a dry-cure mixture and spread them on a rack where they will have as much ventilation as possible. None of these methods is as safe or as satisfactory as storing the meat at the proper temperature.

CUTTING THE CARCASS

There is no one best way to cut up a pork carcass. The choice depends on how you plan to use the pork. If you want to sell it, make the cuts conform to local preferences. If you plan to freeze the meat, cut each piece to a size convenient for cooking. The method described here will produce the maximum amount of meat that can be cured and stored for summer use and a minimum that must be used fresh (fig. 16). This cutting method separates the thick ham, loin, picnic shoulder, and shoulder butt from the thinner bacon strip, fat, and head.

If the head is on the carcass, lay the carcass flat on a table with the back away from you. Start cutting about one-half inch behind the ears. Cut straight to the bone. Lift the head and continue to cut entirely around it. This cut should expose the atlas joint. Twist off the head at this joint.

If you did not split the carcass when warm, it is easy to split after

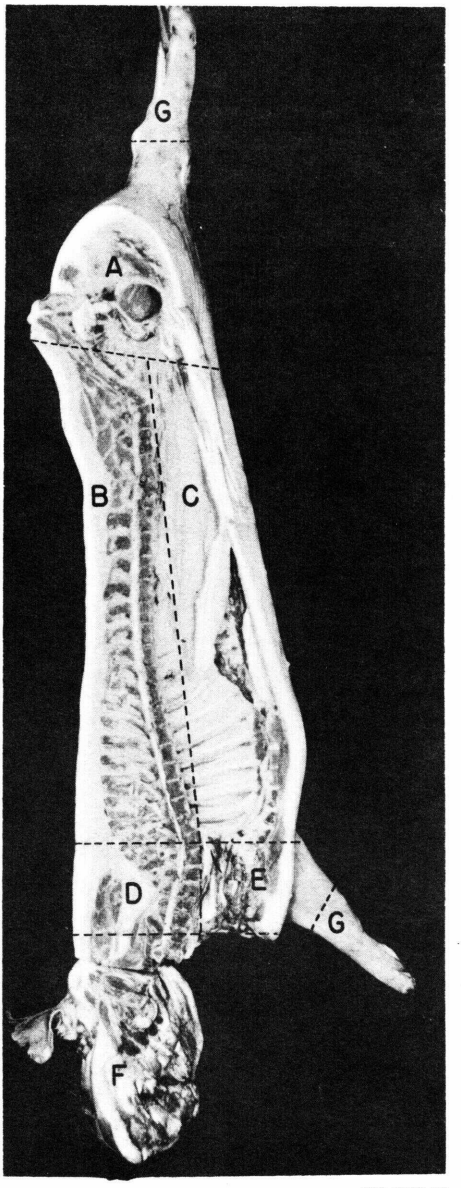

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Figure 16.—Cuts of pork: ***A***, Ham; ***B***, loin and backfat; ***C***, bacon strip with leaf fat; ***D***, shoulder butt and plate; ***E***, picnic shoulder; ***F***, head; ***G***, feet.

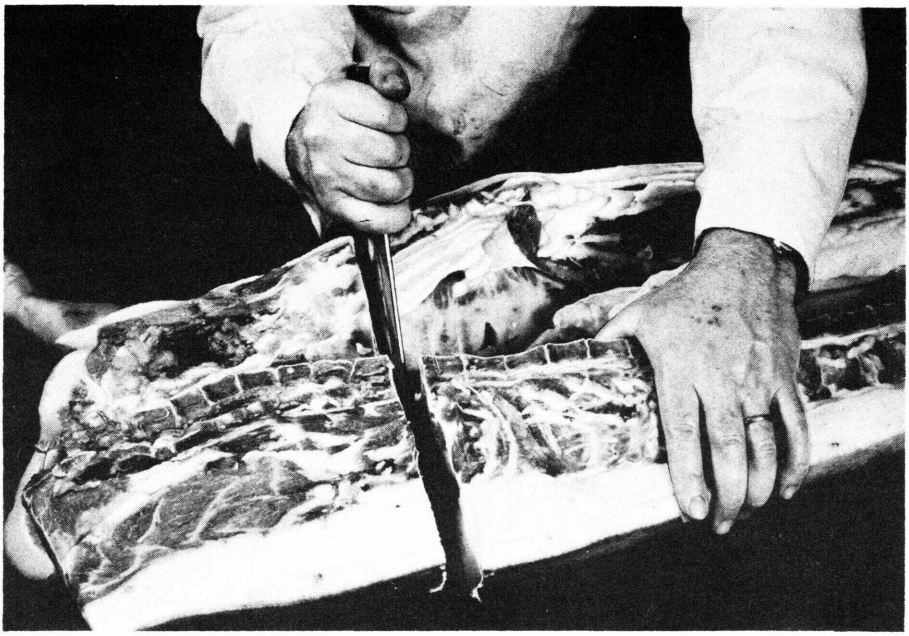

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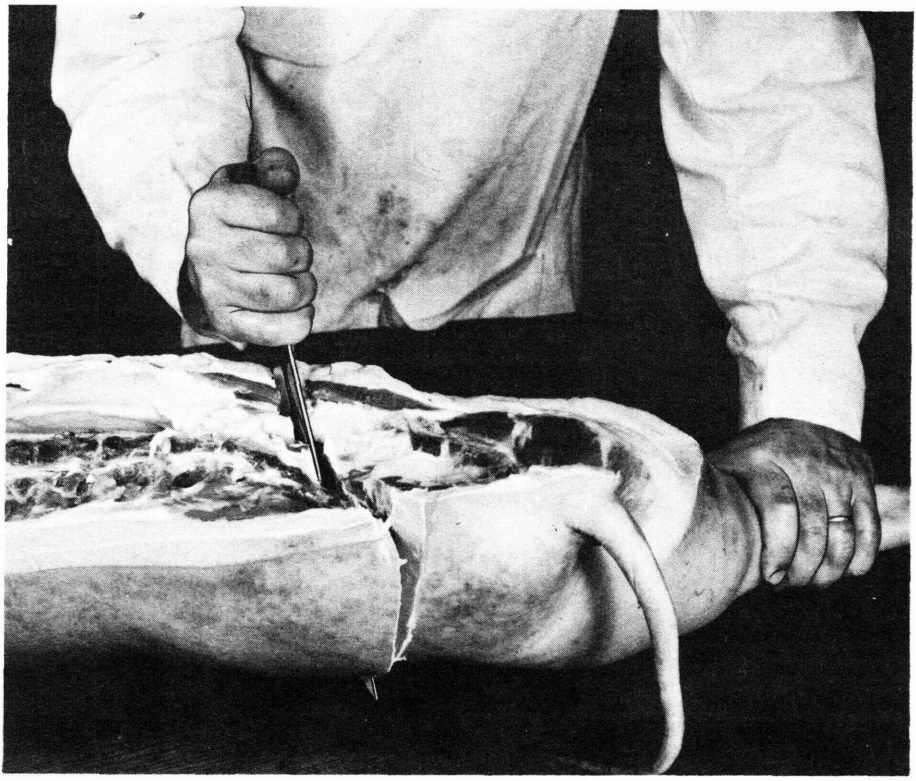
Figure 17.—Removing a two-rib shoulder.

cooling. Place the cold carcass on its back with the hams extending beyond the table. Stand between the hams, and start sawing through the forward or shoulder end of the backbone. Saw from the inside toward the skin. As you split the shoulders, you will spread the two sides, and sawing will be easier.

Remove a two-rib shoulder by sawing between the second and third ribs parallel to the head cut (figs. 16, *D* and 17). Cut off a long ham just behind the rise in the pelvic arch and at right angles to the direction of the hind leg. The more popular short ham is cut through the second vertebra behind the rise. To make the desirable square-top ham, saw at right angles to the shank (figs. 16, *A* and 18).

If you have not removed the leaf fat, remove it before separating the middle into the untrimmed bacon and loin sections. You can remove this layer of fat by cutting it loose along the edge and pulling it toward the rear of the carcass (fig. 19).

Cut the thick loin (fig. 16, *B*) from the thin bacon strip (fig. 16, *C*) just below the curve in the backbone at the shoulder end and at the edge of the tenderloin muscle at the ham end. Lay the middle skin side down and saw across the ribs, as shown in figure 20. Remove backfat from the loin



N-20912

Figure 18.—Removing the square-top ham. Note that cut must be made at right angle to shank.

by cutting down the side of the loin (fig. 21). Raise the fat and loosen it down the center. Three kinds of chops are cut from the pork loin—shoulder end chops, center chops, and chops from the ham end. You can bone out the whole loin muscle for sausage or for canning. Unboned, it can be used for chops and roasts. You also may give it a mild cure.

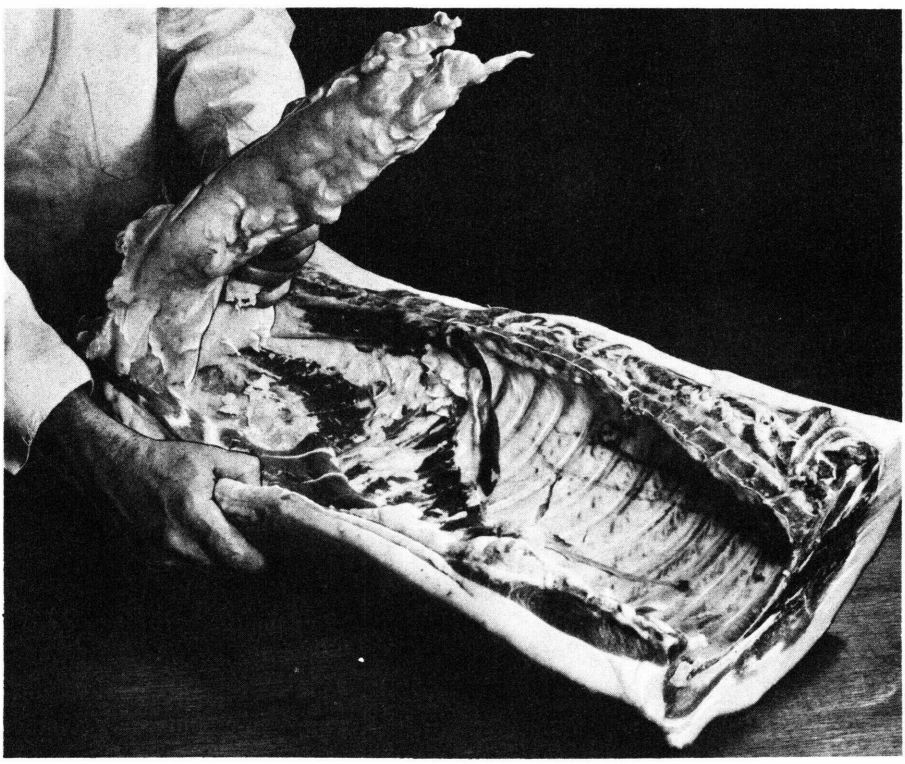
Remove spareribs from the bacon strip by slipping the knife under the bones and cutting around the two exposed sides. Tilt the knife edge slightly toward and against the rib bone. This will leave most of the meat on the bacon strip (fig. 22).

Remove the shoulder rib (neck bone) from the two-rib shoulders the same way you did the spareribs (fig. 23).

The jowls may be cut from the head, trimmed, and cured. After removing the eyes, nasal passages, teeth, and incompletely cleaned parts of the ears and snout, use the rest of the head with the liver, heart, and tongue for cooked products.

Yields of pork from a hog having a live weight of 225 pounds and a carcass weight of 176 pounds

Cuts	Live weight	Carcass weight	Yield
	Percent	*Percent*	*Pounds*
Fresh hams, picnic shoulders, bacon, loin, and shoulder butt.	50	64	113
Ribs, sausage, feet, and head	15	19	34
Total	65	83	147
Fat (for lard)	12	15	27
Trim	2	2	2



N-20913

Figure 19.—Pulling leaf fat.

TRIMMING PORK CUTS

Divide the two-rib shoulder into a shoulder butt, picnic shoulder, and plate. Smoothly trim each part (figs. 24, 25, 26, 27). Use this 3- to 5-pound butt as a fresh roast or cure it with the bacon after removing the end of the shoulder blade.

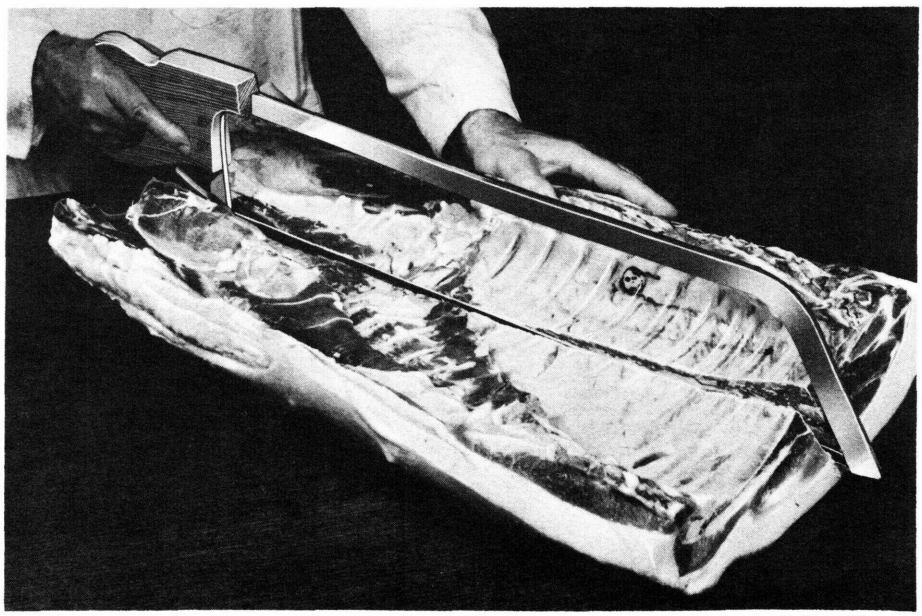
Cut up the plate for lard or cure it as salt pork with the fatback.

Cure the picnic, or remaining shank end, with the hams.

Trim the hams and bacons smoothly and evenly by removing the tail and flank from the ham, and squaring the edges on the four sides of the bacon strip (figs. 28, 29, 30). Face (remove excess fat cover from the trimmed ham) by making a shallow cut through the skin about ¼ to ⅓ down from the hock end of the ham and removing the fat layer over the remainder of the ham (fig. 31). Remove excess fat on the picnic shoulder in a similar manner. You can store the hams and picnic shoulders more satisfactorily in summer if you do not skin them.

If the jowls and fatbacks are to be cured, treat them in the same way. Give spareribs and loins a light cure without further trimming. Save the lean in all trimmings for sausage.

Many persons prefer to remove skin from fat (fig. 32) before cooking lard because the fat alone renders more satisfactorily and produces whiter lard. If the skin is clean, however, it need not be removed.



N-20914

Figure 20.—Separating the loin from the bacon strip.

N-20917

Figure 21.—Removing the backfat from the loin. Approximately one-fourth of backfat is left on the loin.

PROCESSING

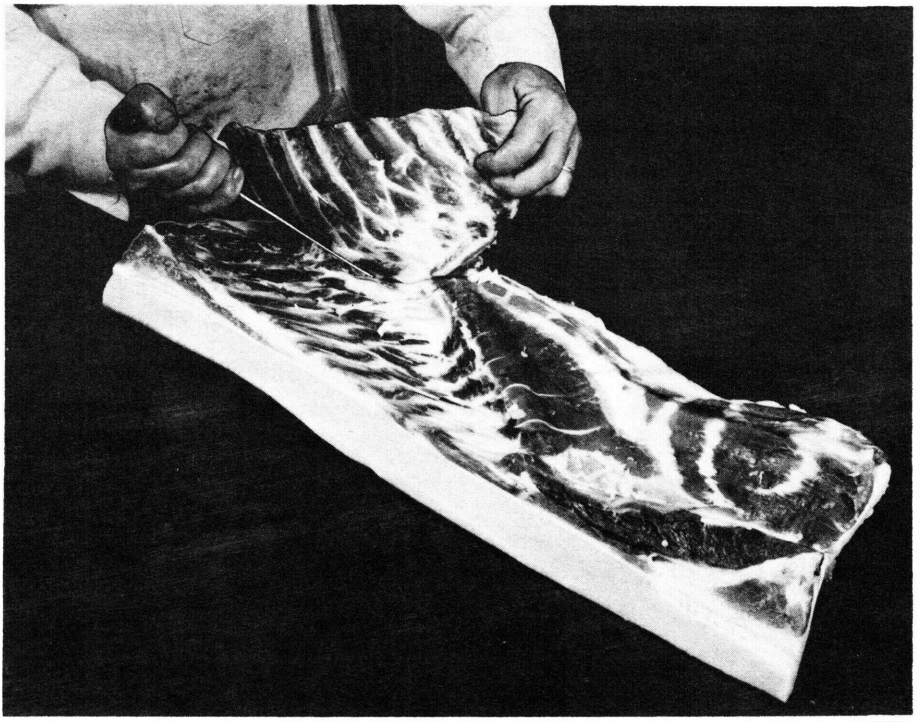
Fresh pork is highly perishable; even at the customary refrigerator temperature of 34° to 36° F. it deteriorates more rapidly than other meats. Pork is not, like other meats, improved greatly by aging. Therefore, process pork for eating or preserving within 3 to 5 days.

There are three ways to preserve farm pork—freezing, curing, and canning. Each way results in a product that has its own characteristic flavor.

FREEZING [1]

Freezing pork does not improve its quality; therefore, the end product is no better than the original. To maintain as nearly as possible the

[1] For further information on freezing meat and poultry products for home use, consult your county agricultural agent or write to the U.S. Department of Agriculture, Washington, D.C. 20250.



N-20915

Figure 22.—Removing the spareribs from the bacon strip. (Note angle of knife.)

original quality, several precautions and rules must be strictly adhered to—

- Freeze only high-quality cuts.
- Prepare pork promptly for freezing (not over 5 days after slaughter).
- Protect meat from drying out (freezer burn) with good moisture-vapor-resistant freezer wrap.
- Prepare convenient family-size packages.
- Freeze meat promptly at −10° F. or lower.
- Store frozen pork at 0° F. or lower.
- Do not store frozen meat more than 6 or 8 months.
- Use sausage and cured meats from freezer storage in 2 to 4 months (salt causes meat to become rancid more quickly).
- Label and date each package.

Cook frozen pork with or without thawing. Thawed or thawing pork usually is moist on the surface. Ideal conditions for growing bacteria and mold are present. If you thaw the meat, thaw it in a refrigerator and cook it promptly. Avoid refreezing previously frozen and thawed pork. Frozen pork that has not been thawed requires a longer time to cook than does thawed pork.

As a rule, cured meats, including sausage, do not freeze as satisfactorily as fresh, uncured meats. If it is necessary to store meats that

are to be smoked, freeze the fresh cuts of bacon, ham, or shoulders, then thaw, cure, and smoke just before using. Package lean trimmings for sausage in convenient-size packages and then freeze. Remove only the amount wanted; thaw, season, grind, and cook.

CURING

Pork is cured in three ways—with salt alone, with salt and sugar, or with salt, sugar, and saltpeter. The last is the preferred "sugar cure." You can sugar-cure pork either dry or in sweet-pickle brine. Because the dry cure is faster, it is popular in the South where warm weather makes spoilage a serious problem.

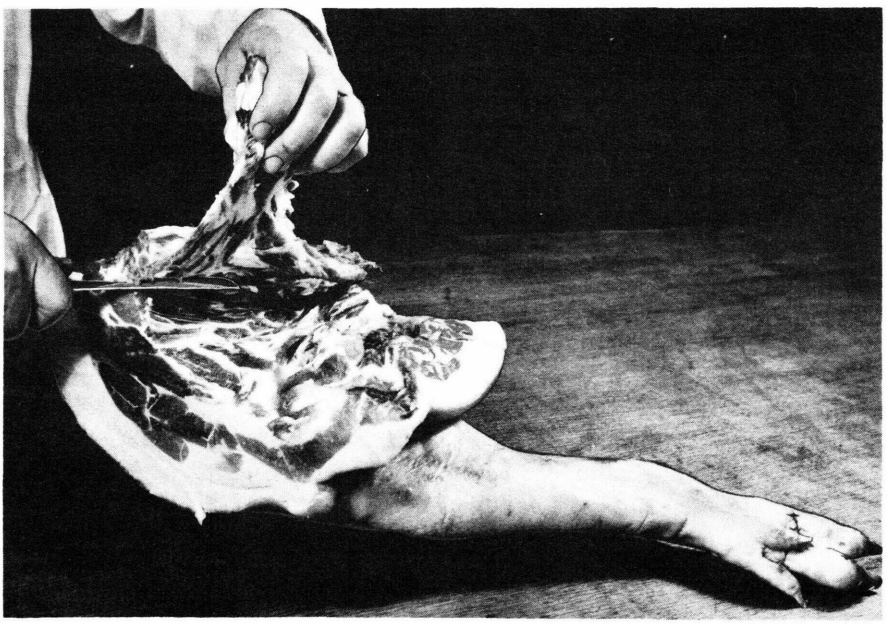
With either the dry or sweet-pickle cure remember the main essentials.

- Chill the meat and keep it cold.
- Use the amount of salt in the recipe.
- Give the meat enough curing time to absorb the salt thoroughly.
- Smoke cured meat long enough to drive out excess moisture.

Weigh meat and curing ingredients carefully. Too little salt may cause spoilage; too much salt makes hard, dry, oversalty meat.

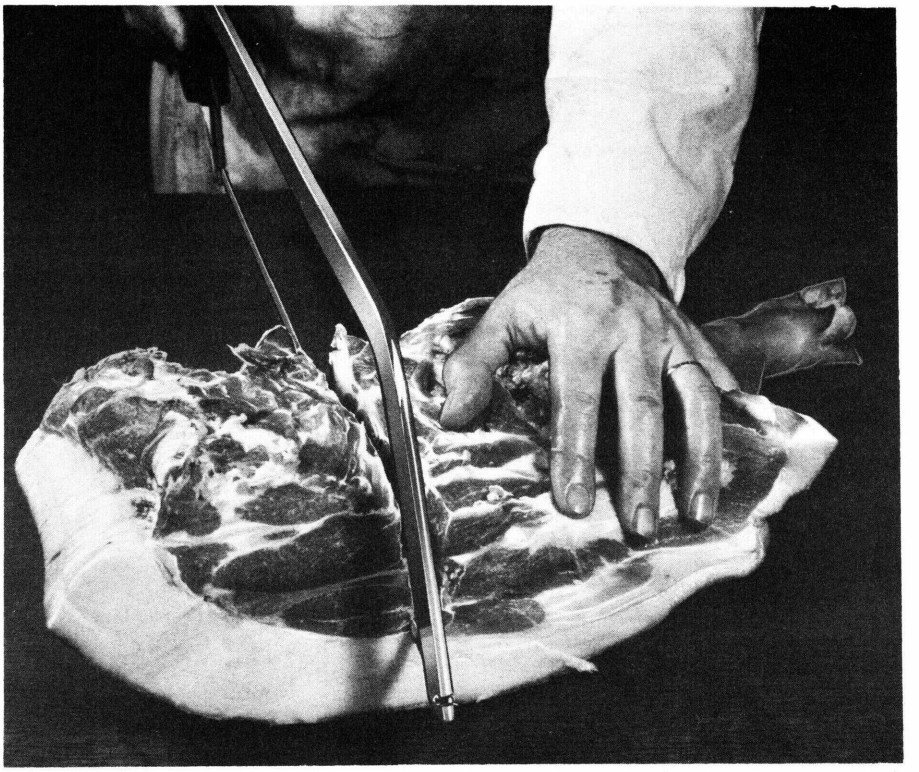
Keep meat cold while in cure. Hold curing meat at a temperature near 36° to 40° F. Higher temperatures increase the chance of spoilage. Lower temperatures slow salt penetration.

If curing temperatures drop below freezing for several days, add the



N-20925

Figure 23.—Removing neck bones from two-rib shoulder.



N-20926

Figure 24.—Separating picnic and shoulder butt. (Note end of blade bone.)

same number of days to curing time. Temperatures below 36° F. slow salt penetration.

Frozen meat is difficult to handle. If fresh meat freezes, thaw it in a chill room or in cold brine before putting it in cure.

Figure curing time carefully. Too few days in cure may cause spoilage. Too long a cure in heavy salt results in loss of quality.

Dry Curing

Check internal temperature of heaviest hams (fig. 33). Be sure it is below 40° F.

Weigh the trimmed meat and the right amount of curing material. For 100 pounds of ham or shoulder use:

Salt—8 pounds
Sugar—2 pounds (brown, white, or sirup)
Saltpeter—2 ounces

For bacon and other thin cuts, use only one-half this amount.

Mix curing ingredients thoroughly, be especially careful to mix the finely powdered saltpeter through the salt (fig. 34).

Divide the curing mixture into two about equal parts, one part to

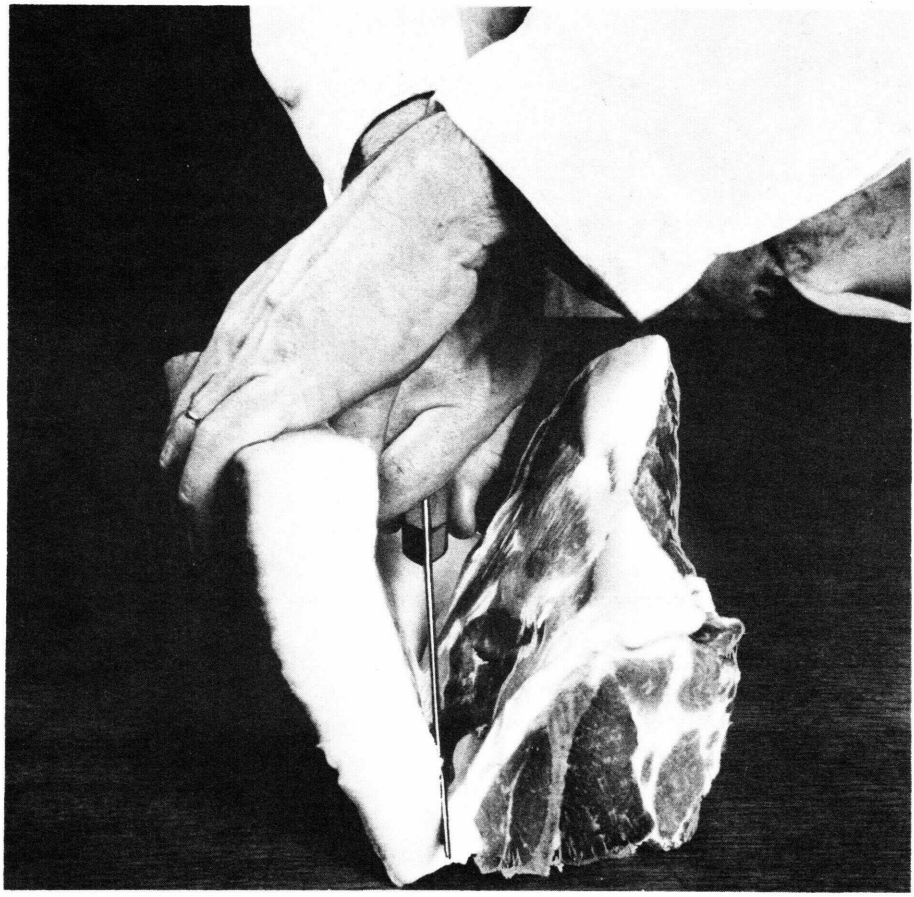
use at once, the other to save for resalting. For bacon and other thin cuts, use the required amount at once; do not resalt.

Rub one part of curing mixture on all surfaces of meat, poking some into shank ends. Pat about a ⅛-inch layer on lean face of hams. Pat a thin covering on shoulder. "Frost" the thin bacon strip with the mixture—the heavier the cut, the greater its share of the mixture (fig. 35).

Fit salted meat in a clean barrel or crock, being careful not to shake off the curing mixture. Hold in a cold place, 36° to 40° F. (fig. 36).

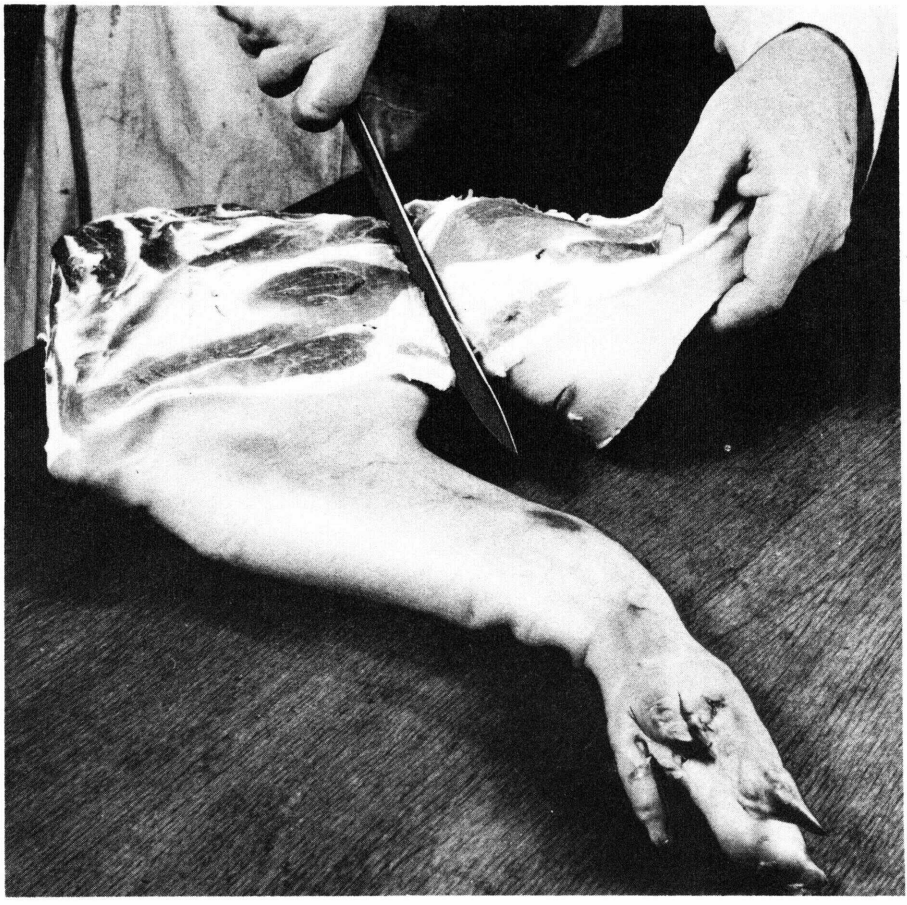
Figure time in cure (a minimum of 25 days): Bacon—1½ days to the pound; hams and shoulders—2 days to the pound. Check curing time on calendar.

Resalt with other half of curing mixture 6 to 8 days after meat is put in cure. Salt hams and shoulders as



N-20927

Figure 25.—Separating plate fat from lean shoulder butt.



N-20930

Figure 26.—Trimming picnic shoulder.

before (fig. 37). For bacon and other thin cuts, add no more curing mixture. Keep pack cold, 36° to 40° F.

Give the salt plenty of time to penetrate to the center of the cuts and distribute itself evenly through the piece (2 or even 3 days to the pound, per piece, dry cure).

All the surface salt may be absorbed into the dry-cured meat before curing time is up. Give it more time to work down into the center of the cuts.

On the farm, meat often has to be cured at temperatures above 40° F. Under these conditions, speed up salt penetration.

- Salt lightly and spread the fresh, warm cuts. (Never pile warm meat or blanket it with salt.)
- Poke salt into the joints.
- Bone or slice the cuts into smaller, more quickly salted pieces.

All these methods help and may save the meat, but none are so satisfactory as curing at the proper temperature—36° to 40° F.

Preventing Oversaltiness

The line between just salty enough to keep and too salty to taste good is narrow. Use care to make a sound and a palatable product.

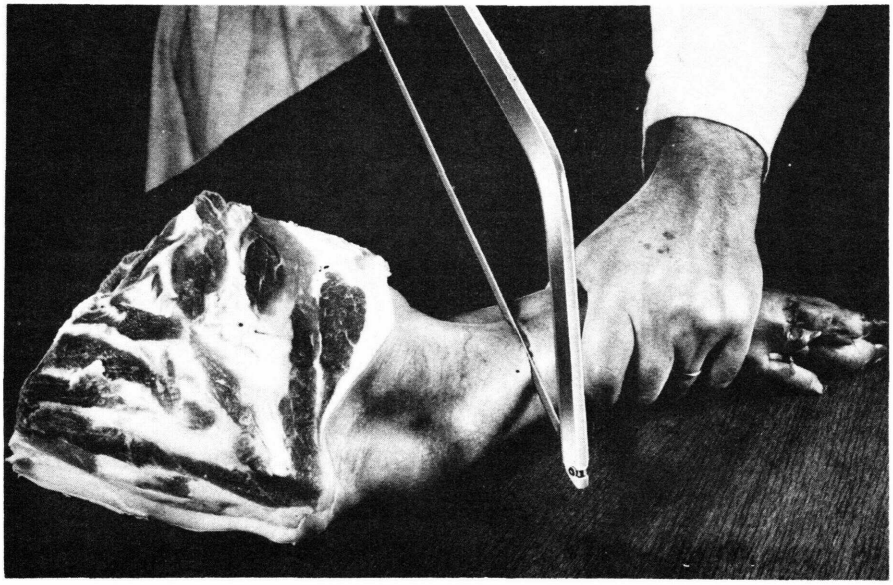
Use 8 pounds of salt in dry-curing 100 pounds of trimmed pork to produce a cure that is on the salty side. If you are careful to get all the mixture packed into the shanks and patted on the faces of the hams and shoulders, 6 pounds of salt is enough and will make the meat more palatable.

Sweet-pickle Curing

Fit the cold, smoothly trimmed cuts into a clean barrel or crock. Cover with a cold pickle solution (36° to 40° F.) made by dissolving 8 pounds of salt, 2 pounds of sugar, and 2 ounces of saltpeter in 4½ gallons of water (fig. 38). Weight the meat to keep it from floating above the pickle solution (fig. 39). Use enough solution to submerge the meat. Keep pack cold throughout curing period—at 36° to 40° if possible.

Overhaul the pack about the seventh day after putting it in cure by removing all the meat, pouring out the sweet pickle, repacking the meat, and covering with the same restirred curing mixture. Overhaul two more times—about the 14th and 28th days.

Curing time for hams and shoulders is 3½ to 4 days to the pound, with a minimum of 28 days for the lightweight cuts. Thus, a 6-pound shoulder needs 28 days in cure; a 15-pound ham, 60 days. However, a 10-pound



N-20931

Figure 27.—Removing foot from trimmed picnic shoulder.

bacon needs 15 days in cure; heavier bacon and loins, 21 days.

Bacon may receive a milder cure if you use 5½ instead of 4½ gallons of water to make the sweet pickle.

Pickled pork may be left in curing solution until used, but it is rather salty.

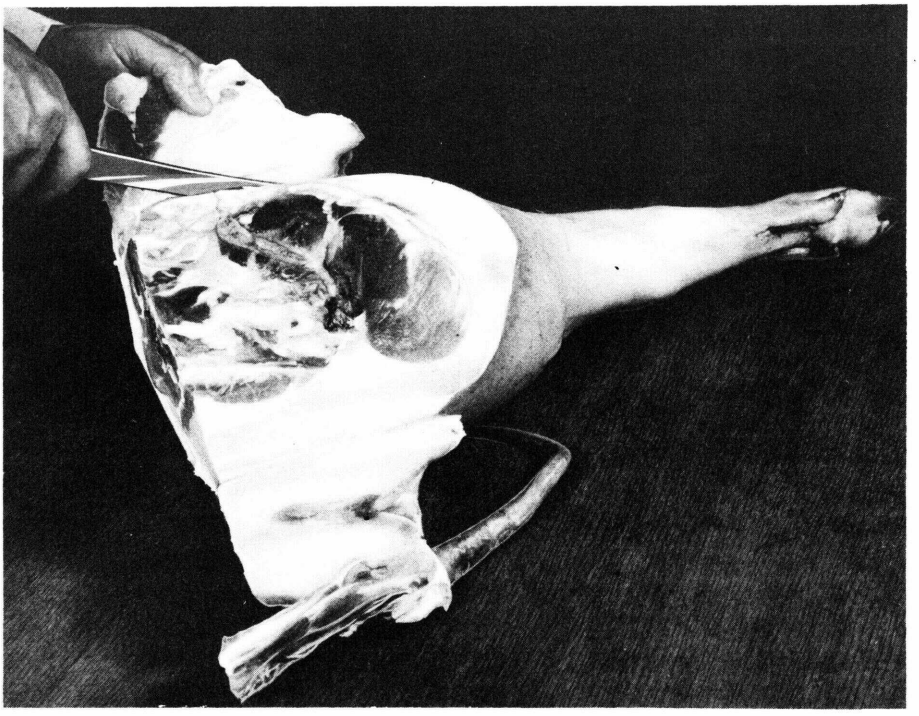
If the sweet-pickle solution sours or becomes ropy or sirupy, discard it. Scrub the meat in hot water, scald and rechill the barrel, repack the meat, and cover with new, cold, curing solution. Use 5½ gallons of water to make this second solution instead of the 4½ recommended above.

Preparing for Smoking

Remove pieces from the dry or brine pack when their curing time is up. Brush the lighter cuts to remove excess dry mixture or lift them from the brine and hold in a cold place until the heavier pieces are ready to smoke.

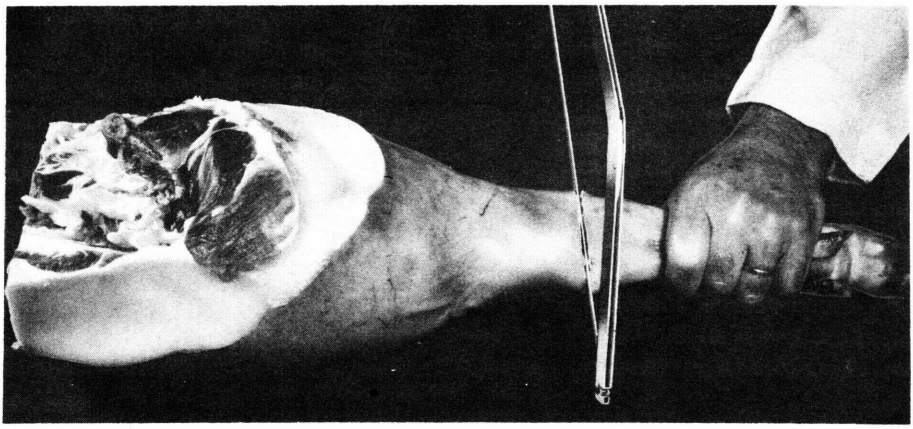
Soak fully cured meat in cold, fresh water to remove some surface salt (15 to 30 minutes).

String meat for hanging in smoke: Hams and shoulders, through shank. Bacon, reinforce flank end with hardwood skewer or clean, galvanized



N-20939

Figure 28.—Trimming square cut ham. The cut should follow the contour of the ham.



N-20940

Figure 29.—Removing leg from trimmed ham.

wire to hold it square in smoke (fig. 40).

Scrub strung meat clean with sharp brush and hot water (110° to 125° F.) so it will take brighter color in smoke (fig. 41).

If smoked flavor is not desired, hang cured meat to dry for about a week before bagging it.

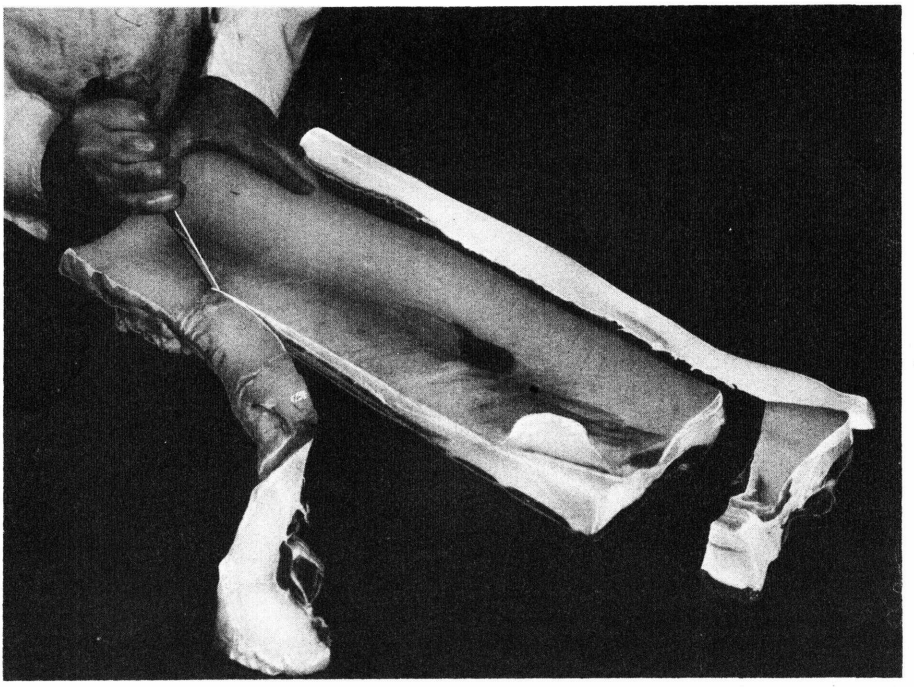
Smokehouses

Smokehouses range from the temporary "one-hog" type made from a 50-gallon barrel to permanent structures suitable for both smoking and storing meat.

Smokehouses should be of reasonably tight construction to permit easy regulation of temperature and flow of smoke and air. A rapid flow of air past the meat is needed at the beginning of the smoking operation, to drive off surplus moisture. Less rapid air movement near the end of the smoking period prevents excessive shrinkage in weight of the meat. A temperature from 90° to 120° F. normally is used; the lower temperatures are preferred.

A 50-gallon barrel, with both heads removed, or a box with tight sides, can be used for smoking small quantities of meat (fig. 42). Set the barrel over the upper end of a shallow, sloping, covered trench and dig a pit at the lower end for the fire. Control the heat of the fire by covering the pit with a piece of sheet metal and mounding earth around the edges, so as to cut off most of the draft. Clean muslin or burlap hung over the top of the barrel will protect a 1-inch opening between the barrel and the cleated top, which rests on broomsticks supporting the meat.

The smokehouse illustrated in figure 43 is large enough for average farm needs and is easily constructed. The outside fire pit makes temperature control easy and reduces the fire hazard. Tight construction and well-fitted ventilators provide effective regulation of the air flow past the meat.



N-20916

Figure 30.—Trimming bacon.

Meat can be crowded into a smokehouse, but no piece should touch another piece or the wall. The space required varies with the weight of the cut, but 12 inches in width both ways and 2 feet in height for each piece is a fair basis for estimating the capacity of the house.

Movable two-by-fours across the house for hanging the meat enable the operator to adjust the hangers to the size of the hams or sides of bacon being smoked. Two or more tiers of meat can be hung in the house. A taller house, holding four or more tiers of meat, can be served by the same fire pit.

Locate the frame type of smokehouse at least 50 feet from other buildings.

A solid, frostproof foundation is essential. A concrete floor is desirable, as it can be made both ratproof and flyproof and is more easily cleaned than wood.

Smoking Cured Pork

Smoking colors, flavors, and dries cured pork and slows the development of rancidity. It has a slight preservative action.

Hang the cured, soaked, scrubbed meat to drip overnight to prevent streaking or smudging in smoke. A wet surface will not take a uniform smoked color. Hang so that no pieces touch.

In the smokehouse, build a fire of any hardwood—hickory, oak, apple,

pecan—or even corn cobs. Hardwood sawdust is excellent. Never use pine; its smoke is sooty and strong smelling.

Heat smokehouse to 100° to 120° F., just hot enough to melt the surface grease.

Open ventilators to let out moisture.

Close ventilators the second day, and smoke 1 or more days, or until meat has the desired color. A thin haze of smoke is as effective as a dense cloud.

Be careful not to overheat and scorch the meat.

A fire built after the Indian fashion, with the sticks radiating from the center like spokes of a wheel, becomes lower and cooler as it burns. Building such a fire is a good precaution, for inattention to a hot fire has ruined the meat in many a smokehouse. Use green sawdust to deaden the blaze.

Liquid smoke is presently being allowed in federally inspected plants with specific labelling regulations.

Testing Smoked Meat

Often you can detect sourness in smoked pork when the warm meat is removed from the smokehouse. You may notice a taint a week or two after smoking. Most of the meat

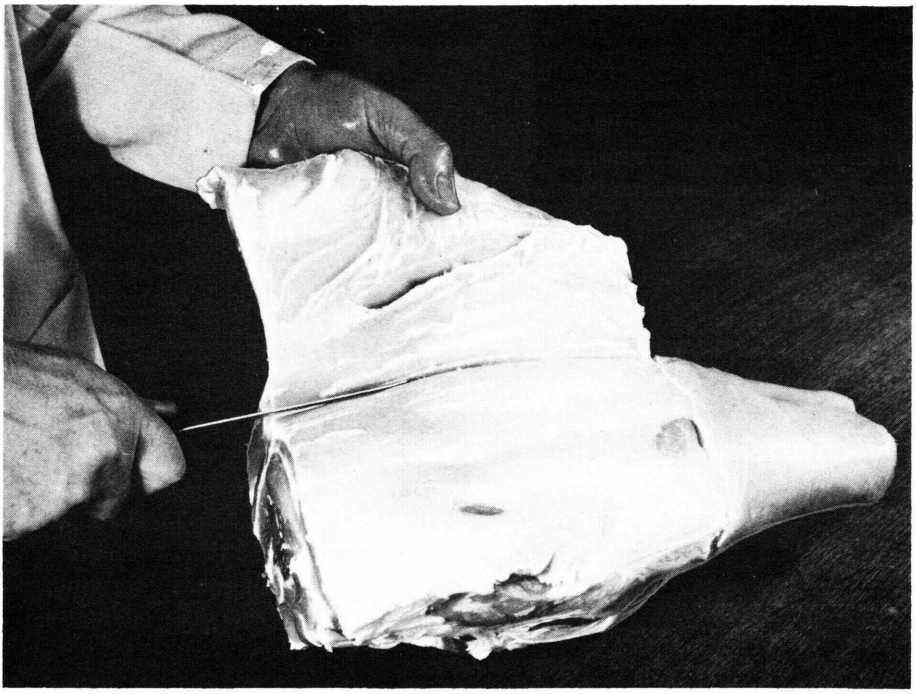


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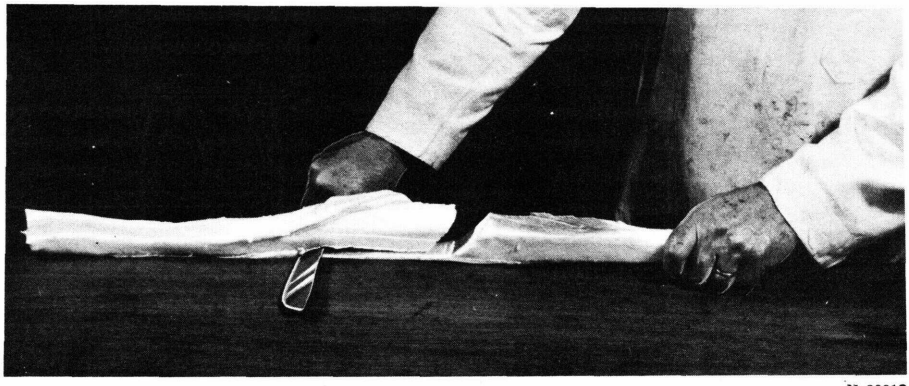
Figure 31.—Skinning ham. From ¼ to ½ inch of fat should be left to cover lean.



N-20918

Figure 32.—Skinning the backfat and trimmings. Keep knife parallel with the table and the edge slightly downward toward the skin.

that safely reaches this stage may be considered sound.

Use a ham trier to test each piece. This instrument resembles a narrow 10-inch harness awl. You may use a length of stiff wire sharpened at one end. Run the trier along the bone to the center of the ham from both hock and loin ends. If the trier brings out a sweet odor, the meat is sound. If the trier carries an unpleasant odor, cut open the piece and examine it carefully for spoilage. If there is a definite odor of putrefaction, destroy the entire piece. Try shoulders in the shank, at the shoulder point, and under the bladebone.

Wrapping and Storing Smoked Meat

If possible, plan the date for killing and curing so that the smoked meat can be bagged or put in an insectproof place before flies appear in the spring. Keep careful watch for insect infestation throughout the storage period.

After the smoked meat has cooled, it is ready to be wrapped and stored. Wrapping protects meat from insects and partially excludes light and air, which speed development of rancidity in fat.

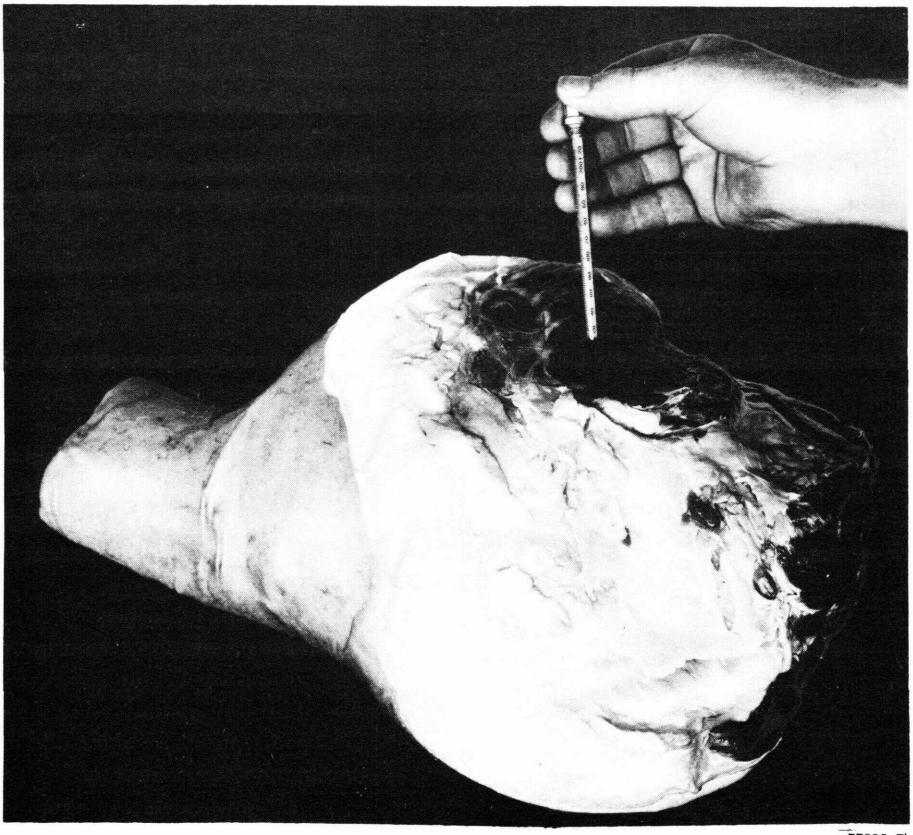
Unbagged smoked meat cannot be stored safely, even in well-built, fly-tight smokehouses. Flies or fly eggs will get in, either on a piece of meat or when the door is opened. If each piece is properly cured and smoked, wrapped, bagged, and hung separately, it will be safe to store in a dry, dark, cool, well-ventilated place. Many farmers keep their hams and shoulders a year or longer until they have developed the mellow flavor characteristic of stored, smoked pork.

You can rub pepper on the meat at this time to add flavor. Ground black pepper, with or without a little red pepper, may be used.

Cover the meat with parchment paper and put into muslin bags. Use a paper wrapping that is heavy enough to keep the grease from soaking the bottom of the bag. Fold over the tops of the bags and tie them securely; make a loop in the outside tie string for hanging the meat. Do not hang wrapped meat by the string that passes through the meat, because insects may enter the package along the string.

You can further protect each sack by painting it with yellow wash; for 100 pounds of hams or bacon use 3 pounds of barium sulfate, 1¼ ounces of yellow ocher, 1 ounce of glue (dry), and 6 ounces of flour.

Half fill a pail with water and mix in the flour—break up all lumps. Mix the ocher with a quart of water in a separate pan, add the glue, and pour into the flour-and-water mixture. Bring this mixture to a boil and add the barium sulfate slowly; stir constantly. Make the wash the day before it is required. Stir it fre-



77825-B

Figure 33.—Be sure internal temperature is below 40° F.

quently while using and apply with a brush. If you prefer, paint the bags with lime, clay, or flour mixed with water to a rather thick consistency.

Bacon usually is more palatable when freshly cured and smoked. It does not keep as well as hams and shoulders, and most farmers prefer to use it during the spring and early summer.

Skipper Flies

If skipper fly larvae attack meat, trim off and burn the infested parts. Use the sound parts. Larvae may burrow deeply along the bone and shank. Prevent further damage by refrigerated storage.

Refrigerated Storage

Insects, such as skipper flies, will not multiply at temperatures below 45° F. Surface mold will grow at temperatures above 15° to 18°.

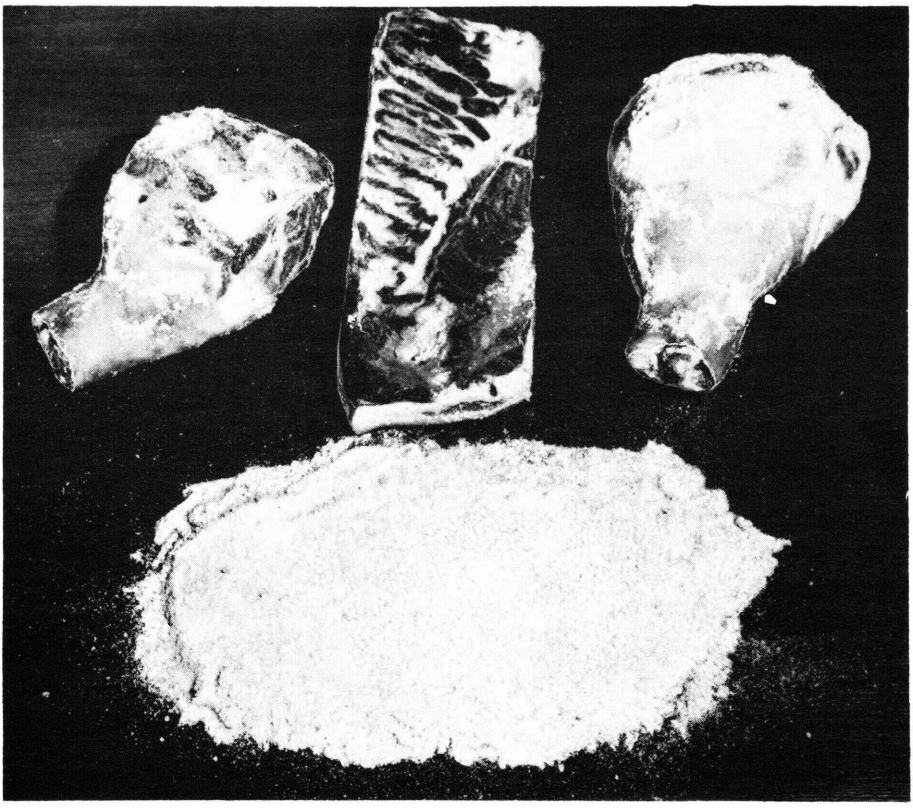
Mild bacon often is kept in freezer storage, but, to save locker space, the hams and shoulders often are held at home, unrefrigerated. Cured pork will develop some rancidity even in the freezer.

Mold Growth

Surface mold will not affect the wholesomeness of the meat, even if it adds a moldy flavor. Most mold and mold flavor can be scrubbed or trimmed off. Oiling smoked meat

77658-B

Figure 34.—Mix curing ingredients thoroughly.



77660-B

Figure 35.—Rub curing mixture on all surfaces of the meat—the heavier the cut, the more mixture.

Weight change in curing

Curing method	Fresh	Cured	Cured and smoked	
			Immediate use	Stored 12 months
	Pounds	*Pounds*	*Pounds*	*Pounds*
Dry cure	100	95	90	70 to 75
Brine cure	100	103	96	70 to 75

with edible oil, such as cottonseed oil or lard, will delay mold growth. Repeat oiling in a month or so.

Aged or Smithfield-Style Pork

The characteristic pungent flavor of aged or Smithfield-style hams and shoulders is caused, in part, by the enzymes or ferments normally in the meat. Eight to twelve months' storage at air temperatures or 50 to 70 days in heated storage (105° to 110° F.) is needed to develop this flavor fully. Cured pork ripens slowly, if at all, in refrigeration.

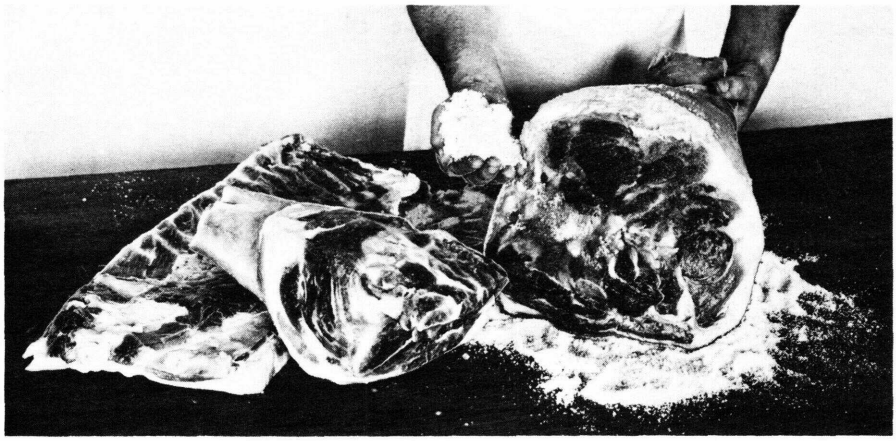
CANNING [2]

You may can pork in the home, if you process it under steam pressure. A temperature of 240° F. is required for effective sterilization. The only practical way to obtain this temperature is by use of a steam-pressure canner. Temperatures in a water bath or a steamer without pressure

[2] Detailed instructions on home canning of meats may be obtained from your county agricultural agent or the U.S. Department of Agriculture, Washington, D.C. 20250.

77661-B

Figure 36.—Fitting salted meat in clean barrel or crock.



77824-B

Figure 37.—Resalting after 6 to 8 days' curing.

are not high enough. Oven canning is dangerous because jars may explode during processing, and the temperature of food in jars does not get high enough to kill spoilage bacteria in meats unless very long processes are used.

All pork for canning should be clean and sound. Unless the pork is to be canned at once, chilling the carcass after slaughtering is necessary. Chilling makes little difference in flavor or tenderness of the canned product. It is recommended, however, because raw meat is easier to handle after chilling. Chilled meat may be held for a few days until it is convenient to can.

Cuts of pork that contain rather large quantities of fat are more economically preserved by curing. The parts of pork usually canned are loins, meat from spareribs, and lean trimmings in sausage. Hams and shoulders may be canned, but they generally are cured. Heart and tongue also may be canned.

LARD RENDERING

Cook the leaf fat, backfat, and fat trimmings. Because caul and ruffle fats from internal organs yield a darker lard than the other fats, usually, you will want to cook them separately. If you remove them carefully and wash and chill them promptly, these fats should have acceptable odor and flavor.

Lard renders more rapidly and completely if you cut the fat into small pieces before putting it in the kettle. You may prefer to grind it. Start cooking slowly with a small quantity of fat that can be stirred easily. When this fat has begun to melt, add the remainder. Do not fill the kettle, or it may boil over. To prevent sticking and scorching, stir the fat frequently and keep the fire low during the entire cooking process.

At the beginning, the temperature of rendering lard will stay about 212° F. As the water contained in the fat tissues evaporates, the tempera-

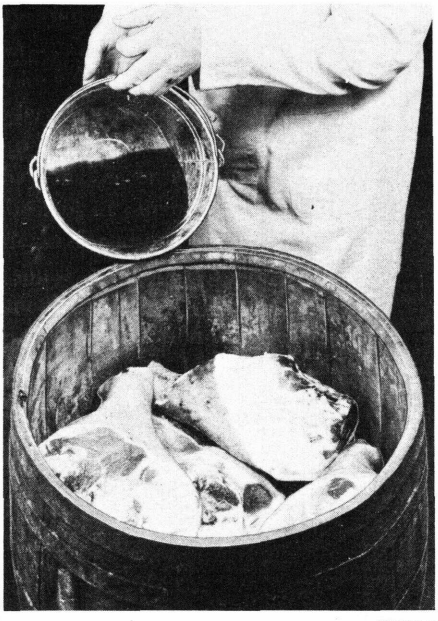


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Figure 38.—Covering the meat with cold curing solution.

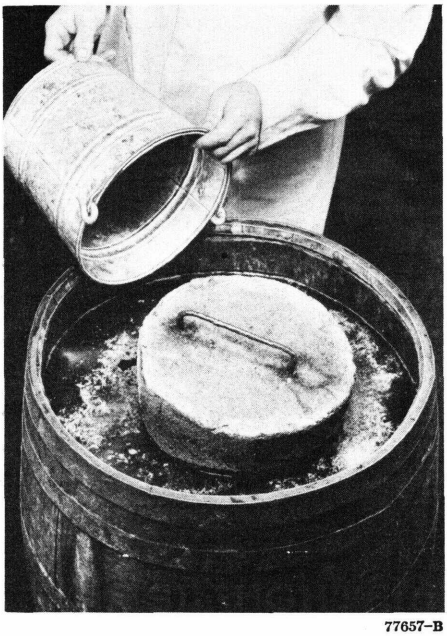

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Figure 39.—Weight the meat to keep it from floating.

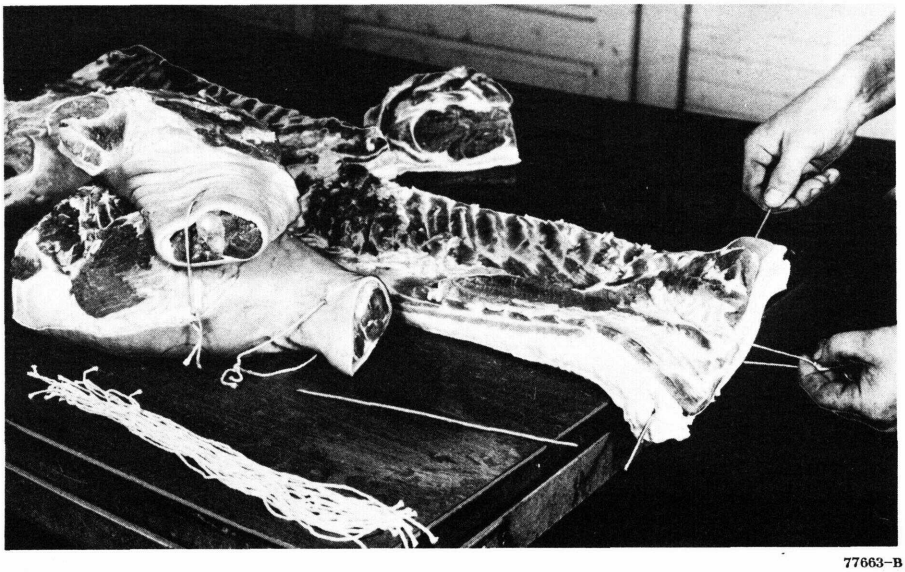

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Figure 40.—Stringing meat for hanging in smoke.

ture will rise slowly. Do not allow it to go higher than 255°.

As rendering proceeds, the residual tissues (cracklings) brown and float. When they are more nearly completely rendered, they gradually sink to the bottom. Take care to prevent small particles of cracklings from sticking and scorching on the bottom of the kettle. You can stop cooking when the cracklings still are floating, but complete rendering removes a greater proportion of the moisture and produces lard that is less likely to spoil.

Allow the rendered lard to settle and cool slightly before emptying the kettle. Carefully siphon or dip the liquid lard into containers. Put the rest of the lard, containing the cracklings, through a press. Strain the lard through a screen covered with 2 or 3 thicknesses of cheesecloth. Put the hot lard into 5- or 10-pound containers and store it immediately at a temperature near or below freezing. At this temperature, it will chill rapidly enough to produce a fine grain.

Leaf fat yields 90 to 93 percent of its weight in rendered lard; a combination of leaf fat, backfat, and cutting fat, 80 to 85 percent; and visceral fat, 55 to 65 percent. Well-pressed cracklings from skinless fat cooked in an average kettle will be 4 to 6 percent of the original weight of the fat.

Air and light may cause a chemical change that makes stored lard rancid. For this reason, fill the containers to the top, seal with a tight cover, and store in a dark, cool place. Once lard becomes rancid, it is impossible to improve it.

If the moisture has been eliminated from the lard by thorough rendering, water souring should not develop during storage.

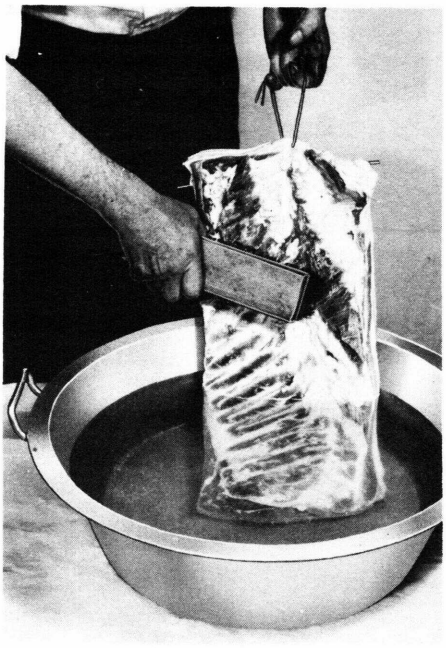

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Figure 41.—Scrubbing meat with sharp brush and hot water.

PREPARING SAUSAGE

Sausage may be made one of the most desirable and appetizing of all pork products. For each of the many kinds of sausage you can vary the seasoning to suit the taste. The few recipes included here are offered mainly as a guide. Desirable sausage can be made only from sound, high-quality materials. Shoulders, bacon

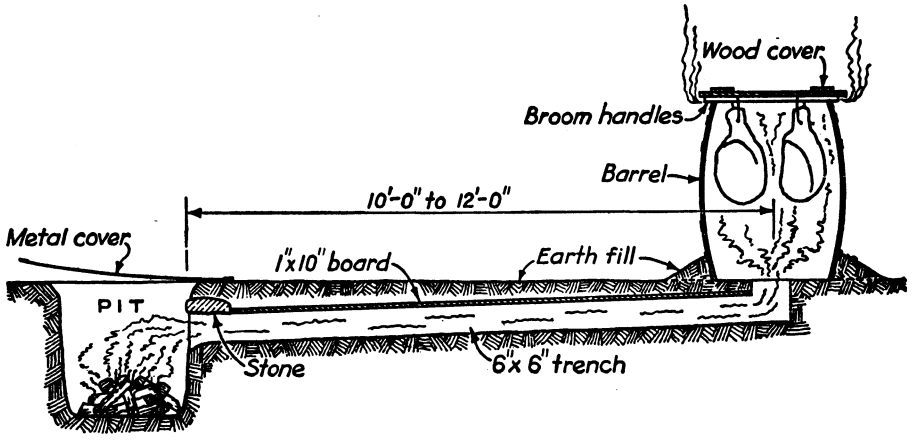

Figure 42.—Barrel for smoking. Stovepipe or tile, if available, could be used for the flue.

strips, and even the loins and hams often are made into sausage along with the trimmings. Care and accuracy in proportioning ingredients are essential.

Your sausage grinder should have two combs or plates with ½- and ⅛-inch holes, respectively. You can use a small hand stuffer.

Several types of casings are sold by butcher supply houses. Soak animal casings for several minutes in warm water and flush out immediately before using. You also can stuff sausage in muslin bags. After scrubbing and chilling, dip the stuffed bags in paraffin.

In stuffing, force enough sausage into the stuffer attachment to fill it. Slip as much casing over the attachment as it will hold. If you use muslin casing, pull the closed end of the casing up tightly against the end of the stuffing tube to prevent air pockets in the sausage.

Support the casing at the end of the stuffer with the first finger of your left hand while you turn the crank with your right hand. Press upward with the left forefinger and raise the stuffed casing above the end of the stuffer to pack the casing more tightly. Cut animal casings after the proper-sized ring or length is stuffed and begin a new length.

Drive a tenpenny nail into the far corner of the top of a table. Fasten one end of a stout, soft, white string about 3 feet long to the nail. Grasp both cut ends of the sausage casing in the left hand and tie them together with two half hitches of the string. Tie the first ring near the nail and each succeeding one a little farther down the string.

Fresh Sausage

The fresh trimmings from which pork sausage is made should be about

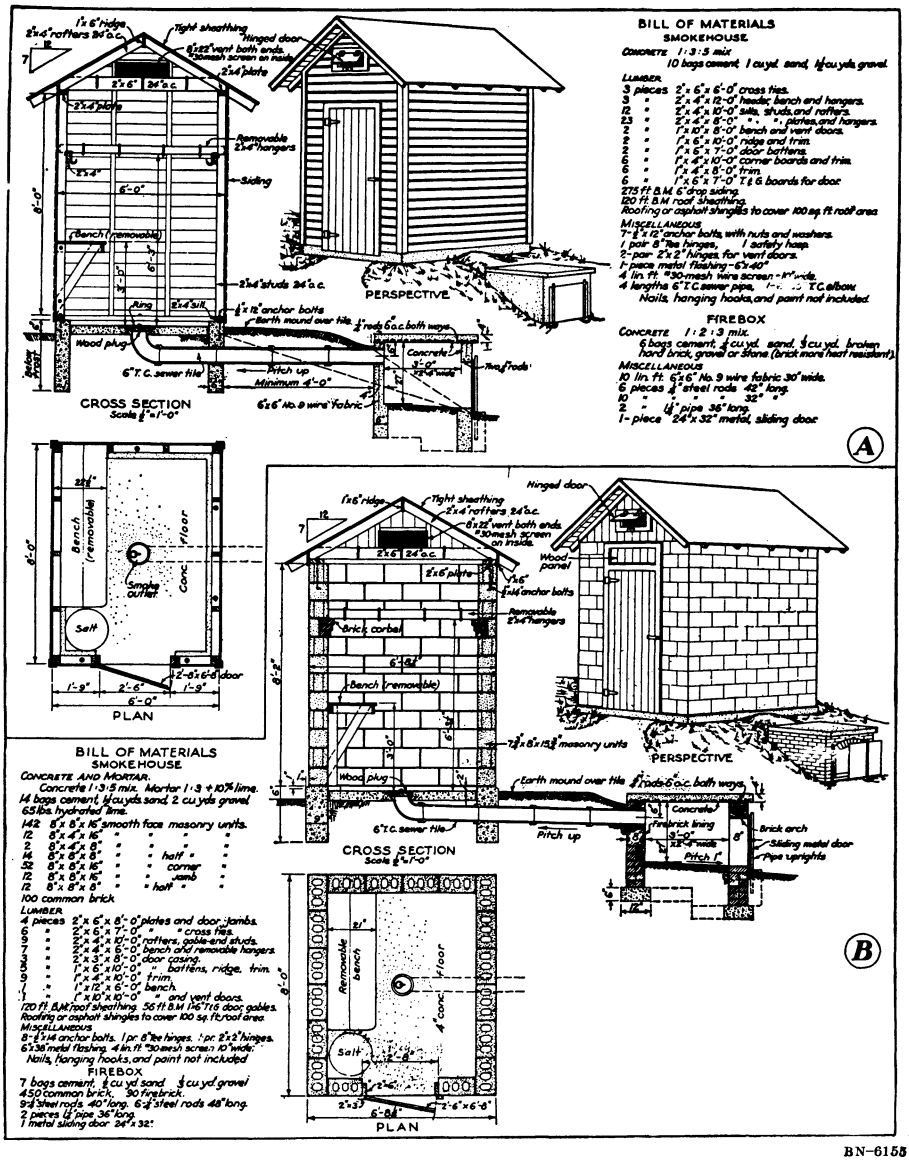

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Figure 43.—Smokehouse: Drawings and bill of materials for frame construction (*A*) and for cement-block construction (*B*).

⅛ fat and ⅞ lean. If more fat is included, the sausage may be too rich and will have a large cooking loss. Less fat will make the cooked patties rather hard and dry and difficult to brown.

You can make a small quantity of sausage to test the recipe with these measurements:

4 pounds trimmings
5 teaspoons salt
4 teaspoons ground sage
2 teaspoons ground pepper
½ teaspoon ground cloves or
1 teaspoon ground nutmeg (if desired)
1 teaspoon sugar

For 100 pounds of trimmings use the following:

1¾ pounds salt
2 to 4 ounces ground sage
2 to 4 ounces ground black pepper
½ to 1 ounce red pepper (if desired)
½ to 1 ounce ground cloves, or
1 ounce ground nutmeg (if desired)
12 ounces sugar (if the sausage is to be used quickly)

Thoroughly mix the seasoning, spread it over the trimmings, and grind the whole quantity through the fine plate. You may prefer to grind the unseasoned meat through a plate with ½-inch holes and then mix it with the spices and regrind through a plate with ⅛-inch holes.

If you are stuffing the sausage into casings, do so immediately after grinding. The sausage should be soft enough to pack tightly in the casings without adding cold water.

To make bulk sausage that will slice and fry without crumbling, add a scant half cup of cold water to each 4 pounds of ground, seasoned sausage and knead with the hands until the meat becomes sticky and doughlike. Pack tightly in small molds or pans and chill before slicing.

Smoked Sausage

Use pork sausage made with 2 pounds of salt, instead of 1¾ pounds, per 100 pounds of trimmings. If it is too stiff to stuff properly, add 6 to 10 cups of cold water and knead until the mass becomes doughlike. Stuff tightly in casings and allow to cure for about 24 hours in a cool place. Smoke and dry at a temperature of 70° to 90° F. for a day or two until a dark mahogany color is obtained. Do not keep this sausage until hot weather unless it is canned.

Bologna Sausage

Bologna sausage is made of ground pork and beef mixed with enough water to give the sausage the desirable fine, tenacious texture. Commercial concerns sometimes grind cracked ice with warm beef from freshly slaughtered cattle because this method gives a finer grain to the finished product.

One standard recipe for bologna sausage is as follows:

60 pounds beef
40 pounds pork trimmings
10 quarts cold water
2 to 2½ pounds salt
1 ounce saltpeter
2 to 4 ounces black pepper
1 to 1½ ounces coriander
1 ounce mace
Onions (if desired)

Grind the chilled beef trimmings with 19 ounces of salt. Use the

coarse grinding plate, and allow the meat to cure in a cool place for about 48 hours. Add salt, in the same proportion, to the coarsely ground pork the next evening and allow to cure overnight. Many persons do not cure the pork.

Regrind the cured beef, using the plate with ⅛-inch holes. Then add the pork and grind the mixture again. If the pork was not cured, add the salt (13 ounces for 40 pounds of pork) before grinding. Add spices and water and mix vigorously until the mass is sticky. Thorough mixing often requires 30 minutes.

Tightly stuff the sausage into beef casings or muslin bags and allow it to hang and cure in a cool place overnight. Put it in a well-ventilated smokehouse heated to 110° to 120° F. Protect the casings from a direct blaze that might scorch them. The sausage should take on a rich mahogany brown in about 2 hours' smoking.

Immediately put the hot, freshly smoked sausage into water heated to 160° to 175° F., and cook it until it squeaks when the pressure of the thumb and finger on the casings is suddenly released. The usual cooking time for sausage stuffed in beef "rounds" is 15 to 30 minutes; for larger casings, 60 to 90 minutes. Plunge the cooked sausage into cold water to chill it. Hang it in a cool place.

COOKING PORK

Fresh pork, smoked picnic shoulder, and shoulder roll should be cooked to an internal temperature of 170° F., whereas other smoked products such as ham, loin, and Canadian bacon need to be cooked to only 160° F.

Previously, cooking temperatures of 180 to 185° F. were recommended to insure destruction of trichinae. Trichinae are rarely found in pork and are readily destroyed by any of the following conditions:

- heating meat throughout to 137° F.
- storage at −20° F. or below for 6 to 12 days.
- storage at −10° F. or below for 10 to 20 days.
- storage at 5° F. or below for 20 to 30 days.

COOKED PRODUCTS

Cooked products include pickled pigs' feet, headcheese, liver sausage, scrapple, and panhas. Cooking is a convenient way to prepare edible parts of cuts that are difficult to bone, such as the head, feet, and tail. It also is a way to use miscellaneous pieces of trimmings, liver, heart, and tongue.

Trim and wash all meat before cooking. Remove the teeth, nasal passages, eyes, and eardrums. If the lips, snout, and ears have been well cleaned, they may be included. Usually, the jowl is cut off and cured. It may be added, but often will cause headcheese and scrapple to be too fat.

Headcheese

Headcheese is easy to make. Cook heads, tongues, skins, hearts, and other pieces. Make deep cuts in

thick pieces of meat, cover with water and simmer until the meat is well done and slips easily from the bones. If you use the skin, cook it in a net or sack; then, you can remove it when so tender that you can push a finger through it. The thick ears and snout require longer cooking than other skin. Grind the skin, using the plate that has ⅛-inch holes. Bone jowls and other pieces after cooking. Grind these with the boneless pieces, such as the heart, using the plate that has ½-inch holes. You may prefer to cut the tongue and some of the larger pieces of fat into strips instead of grinding them.

Mix finely ground skin and coarsely ground pieces of meat with enough of the soup—the water in which the meat was cooked—to make the mass soft without being sloppy. Return this mixture to the kettle and bring to a boil. This reheating mixes the headcheese and makes it thicker. Pour it into shallow pans and chill it. Then you can slice it without difficulty.

Add seasoning at the beginning of the second cooking. Usually it is safe to season to taste. The following quantities of seasoning per 100 pounds of cooked meat, including the added soup, are a satisfactory guide:

- 2 to 2½ pounds salt
- 3 to 5 ounces black pepper
- ¼ to 1 ounce red pepper (if desired)
- 1 ounce ground cloves (if desired)
- 1 ounce coriander (if desired)
- 2 ounces sweet marjoram (if desired)

If you stuff headcheese into casings, season and stuff it before the second cooking. Replace the stuffed headcheese in the remaining soup and let it simmer until it floats. This will take 10 to 30 minutes. Chill in cold water and store in a clean, cool place.

Usually headcheese is eaten cold, sometimes with vinegar.

Liver Sausage

Ten to twenty percent of liver, by weight, usually is added to other cooked products to make liver sausage.

Cook heads, tongues, skins, hearts, and other pieces as for headcheese, but for a shorter period. Remove from the heat when the cuts can be boned. Then scald the livers. If you cut them deeply with a knife, they will be sufficiently seared in about 10 minutes.

Grind all cooked materials moderately fine and add about one-fifth as much soup by weight, using enough soup to make the mixture soft but not sloppy. Season to taste and mix thoroughly. The following are standard quantities of seasonings for 100 pounds of the mixture:

- 2 to 2½ pounds salt
- 2 to 4 ounces black pepper
- 1 to 3 ounces sage (if desired)
- ¼ to 1 ounce red pepper (if desired)
- 1 to 2 ounces allspice (if desired)

Stuff seasoned, well-mixed sausage in beef casings and simmer in water until it floats; usually the time required is 10 to 30 minutes. After cooking, plunge the sausage into cold water, chill for at least 30 minutes, and hang up to drain.

If the meat is cooked too much in the first kettle, the second cooking, after the sausage has been stuffed,

will destroy the tight "live" texture of the finished sausage.

Scrapple

Scrapple, an especially favored breakfast dish in many sections, is made of cooked pork and soup thickened with cornmeal, flour, and sometimes shorts.

Cook the head, heart, and trimmings as for liver sausage, or until the bones can be removed. Cook the skin, if used, until tender. Remove the bones. Grind all remaining material through the fine plate. Return all ground material to the strained soup and bring to a boil.

The cereal mixture to be added may vary widely. One consisting of 7 parts cornmeal and 3 parts white or buckwheat flour or 7 parts cornmeal, 2 parts shorts, and 1 part buckwheat flour may be acceptable.

Four parts (by weight) ground cooked meat products, 3 parts soup, and 1 part dry cereal mixture will produce a richly flavored, satisfactory scrapple. Use more meal and soup if desired.

In adding the cereal mixture, moisten it with some of the cooled soup so that it may be added to the hot soup without forming lumps. Boil for about 30 minutes; stir constantly to prevent sticking. Add the seasoning shortly before the cooking is finished and stir it in well.

Use the following seasonings for 100 pounds of scrapple, including soup and dry cereal mixture:

2 to 2½ pounds salt
2 to 4 ounces black pepper
2 to 4 ounces sweet marjoram
2 to 4 ounces sage (if desired)
1 ounce nutmeg (if desired)
½ ounce mace (if desired)
2 pounds ground onions during second cooking (if desired)
1 ounce red pepper (if desired)

Pour the hot scrapple into small, shallow pans and chill as promptly as possible. If properly made, it can be sliced and fried quickly without much crumbling. The slices may be dipped in egg before they are fried.

Regulations for Shipping Meat or Meat Food Products

Farmers who ship their meats must comply with State and Federal regulations. For details about these regulations, ask your county agricultural agent or write to the U.S. Department of Agriculture, Washington, D.C. 20250.

Panhas

Use the soup remaining after making headcheese or liver sausage to make a kind of cornmeal mush called panhas. Strain out all bones, bring the soup to a boil, and add the meal slowly. A safe way to prevent lumps is to moisten the meal beforehand with a little cooled soup—adding enough to make a thick paste.

Three or four parts soup to one part meal, by volume, is a good proportion. Season to taste with the seasonings given for headcheese. Cook the meal 30 to 45 minutes and pour it into shallow pans to cool. Slice and serve like scrapple.

Pickled Pigs' Feet

In preparing pickled pigs' feet, take special care to clean them thoroughly. The toes and dew claws should have been removed when the carcass was dressed. Trim out glandular tissue between the toes and remove all hair and dirt. Unless you care for them properly, feet begin to spoil about as quickly as any part of the carcass; therefore, put them into cure immediately after thorough chilling.

Cure clean, chilled feet in brine for 15 days to 3 weeks. Make the brine by dissolving 1 pound salt, ¼ pound sugar, and ¼ ounce saltpeter in 9 cups of water. Weight the feet to keep them from floating above the solution. Use enough solution to submerge the meat. Keep pork cold throughout curing period (at 36° to 40° F., if possible).

Slowly cook or simmer cured feet until they are tender. Cook them slowly to keep the skin from parting excessively and the feet from pulling out of shape. Thoroughly chill the cured, cooked feet and pack them in cold, moderately strong (35 grain) vinegar, to which you can add spices such as bay leaves or allspice. You can use the feet at once or keep them in the vinegar for about 3 weeks.

Make souse by cooking cured or uncured feet in a little water until the meat slips from the bones. Season the meat and strained stock with vinegar and spices, bring to a boil, put in molds, and allow to jell. You can add additional cooked pork trimmings.

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